Call Detail Reporting

Manual

MAX Communication Server
Release 7.0 Update 1

April 2014

WARNING!

Toll fraud is committed when individuals unlawfully gain access to customer telecommunication systems. This is a criminal offense. Currently, we do not know of any telecommunications system that is immune to this type of criminal activity. AltiGen Communications, Inc., will not accept liability for any damages, including long distance charges, which result from unauthorized and/or unlawful use. Although AltiGen Communications, Inc., has designed security features into its products, it is your sole responsibility to use the security features and to establish security practices within your company, including training, security awareness, and call auditing.

NOTICE

While every effort has been made to ensure accuracy, AltiGen Communications, Inc., will not be liable for technical or editorial errors or omissions contained within the documentation. The information contained in this documentation is subject to change without notice.

This documentation may be used only in accordance with the terms of the AltiGen Communications, Inc., License Agreement.

AltiGen Communications, Inc.
410 East Plumeria Dr.
San Jose, CA 95134
Telephone: 888-AltiGen (258-4436)
Fax: 408-597-9020
E-mail: info@altigen.com
Web site: www.altigen.com

TRADEMARKS

MAX Communication Server, MaxAdministrator, MaxCommunicator, MaxAgent, MaxSupervisor, MaxInSight, MaxOutlook, MaxCall, Enterprise Manager, AltiServ, AltiLink, AltiConsole, VRPlayer, Zoomerang, IPTalk, Alti-Mobile Extension, InTouch Dialer, AltiReport, and SuperQ are trademarks or registered trademarks of AltiGen Communications, Inc.

All other brand names mentioned are trademarks or registered trademarks of their respective manufacturers.

Copyright © AltiGen Communications, Inc. 2014. All rights reserved.

Contents

CHAPTER 1

Installing CDR Search 1
System Requirements 1
Hardware Requirements 1
Pre-Installation Checklist 2
To install CDR Search on a Client Machine 2
Uninstalling CDR Search 2
Downgrade Procedure 2

CHAPTER 2

CDR Overview 5
Real-Time Monitoring and the CDR Client 5
The RTM Statistics Database 5
Internal Database Configuration (Internal Logger Service) 7
External (Remote) Logging of Call Data 8
Call Center Events and CDR 9
Past and Present CDR 9
Configuration Areas Affecting CDR Information 10
Multi-Project Naming 10
Wrapup 10
Ring No Answer Configurations and VM 11
Login and Logout 11
Changing Time Settings 11

CHAPTER 3

Using CDR Search 13
Logging In 13
Running a Search 18
CDR Search 18
Group CDR Search. 22
Workgroup Statistics Search 24
Search Results 25
Summary (CDR Search and Group CDR Search) 26
Call Details 27

Statistics (WG Statistics) 29
Exporting Records 32
Printing Records 33

CHAPTER 4

Data Storage 35
Common Features of ILS and ELS 35
Differences between ILS and ELS 36
Logger Service Configuration 36
External Logger Server Configuration Tool 37
Configuration GUI for External Logger Server 38
Limitations 39

CHAPTER 4

CDR / Workgroup CDR Search: Typical Searches . . 41
Example CDR Searches 42
Example Workgroup CDR Searches 43
Example Call Sequences and their Effect on CDR Records 44

CHAPTER 5

Records and Data Schema 47
Search Results 47
CDR Search / Group CDR Search Results: Summary Window . . 47
CDR Search / Group CDR Search Results: Detail Window 48
Record Window for Call Info. 48
WG Statistics Search Results: Agent Statistics Window 50
Workgroup Statistics Window. 53
Data Schema 55

Glossary 81

Index 91

Installing CDR Search

CDR Search is a client application that lets you search a Call Detail Reporting database. You can install CDR Search on either the system server or on an administrator client desktop. CDR Search 7.0 Update 1 works only with MAX Communication Server (MAXCS) ACC/ACM 7.0 Update 1.

Important: MAXCS client programs earlier than MAXCS 7.0 Update 1 cannot be installed in the same computer running 7.0 Update 1 client programs.

System Requirements

The client system must meet the following minimum requirements.

- IBM/PC AT compatible system
- 2GHz CPU
- Operating systems:
  - Windows Server 2003 Telecom server with SP2
  - Windows Server 2008 with SP1
  - Windows 2008 R2
  - Windows 2012 R2
  - Windows 7
  - Windows 8.1
- 250 MB available hard drive disk space
- 256 MB RAM
- SVGA monitor (800 x 600) with 256 color display, or better
- Keyboard and mouse
- MAX Communication Server ACC/ACM 7.0 Update 1 running on a server accessible to this client.

Hardware Requirements

- External database server should be at least Pentium 4, 1 GHz with 512M RAM. The following external CDR databases are supported:
  - Microsoft SQL Server 2008
  - Microsoft SQL Server 2008 Express
  - Microsoft SQL Server 2005
  - Microsoft SQL Server 2000

Important: Refer to “Limitations” for a list of limitations for CDR Search.

Pre-Installation Checklist

Before installing CDR Search, make sure the following is done:

- MAXCS 7.0 Update 1 ACC or ACM has been installed on the system server.
- TCP/IP is enabled on both machines.
- The client is able to connect to the server on the network.
- The person installing CDR Search has local administrator rights on the client system.

To install CDR Search on a Client Machine

1. Log in to the client machine using a domain account and make sure it is connected to the network on which the system is running.
2. Exit all Windows applications.
3. Insert the MAXCS Release 7 Update 1 DVD into the drive.
4. In the CDR > CDRSearch_Client folder, run **Setup.exe**. Follow the step-by-step installation instructions as they appear on the screen.

Note: If CDR Search is running outside of a network and is used to query internal databases, ports 10025, 10027 and 10029 need to be opened.

Uninstalling CDR Search

1. From the Windows Start menu, go to **Control Panel** > **Add/Remove Programs**. Select **CDR Search 7.0 Update 1**, and click the **Remove** button**.**
2. Click **Yes** when asked if you want to uninstall the program.

Downgrade Procedure

1. Go to **Control Panel** > **Add/Remove Programs** and remove the CDR Search 7.0 Update 1 program and ALL OTHER 7.0 Update 1 client applications (including MaxCommunicator, MaxAgent, MaxSupervisor, MaxOutlook, and AltiConsole).
2. Reboot your system.
3. Go to "<local drive>:**Program Files\AltiGen\Shared Files**" and remove **AlpInterface.dll**.

   Note: The **AlpInterface** might be located under "\WinNT\System32\", "\Windows\System32\" or some other location. Use the **Search for Files and Folders** feature to locate and remove all **AlpInterface.dll** files from the system.
4. Install the prior CDR Search software.

CHAPTER 2

CDR Overview

AltiGen's Call Detail Recording (CDR) solutions include data creating, recording, collecting, and reporting. While CDR can be used for individual and departmental billing, timecards, and market analysis, this manual places special emphasis on CDR's use for call center applications. The data schema are designed to provide information for PBX, call center, billing, multi-project, and performance tracking information.

Real-Time Monitoring and the CDR Client

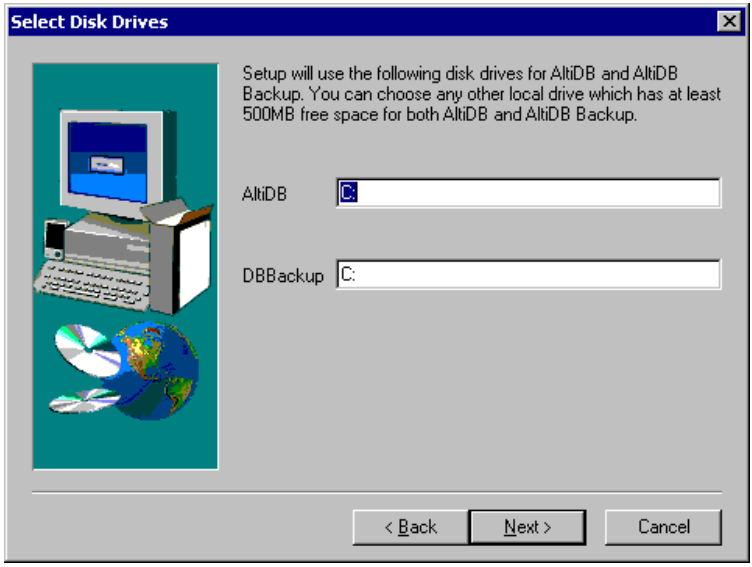
Workgroup call data is captured from the real-time monitoring function of the MaxSupervisor client application and made available to a dedicated feature—the "WG Statistics" tab—in the CDR Search client. The difference between call detail recording (described immediately below) and the RTM records is that call detail recording tracks every individual call, from auto-attendant through disconnect, while RTM reporting takes "snapshots" of call center data at continuous intervals ranging from every 15 minutes to every 24 hours.

Such data contains statistics—counts, sums, totals, averages, and percentages—on items such as the number of calls in the workgroup's queue, the amount of time callers waited in the queue, and the number of calls that were abandoned from the queue, during the searched time period. This data is stored in its own database, which is configured for backups, storage limits, and the granularity of your data (determined by the interval size) via settings in MaxAdmin.

The RTM Statistics Database

The RTM statistics database, called "rtmData.mdb," is installed automatically with MAXCS in a folder called "AltiDB," in any location the user chooses

.


Select Disk Drives
Setup will use the following disk drives for AltiDB and AltiDB Backup. You can choose any other local drive which has at least 500MB free space for both AltiDB and AltiDB Backup.
AltiDB
C:
DBBackup
C:
< Back
Next >
Cancel

You can set up call reporting if MAXCS and MaxAdmin are installed on the same server.

In MAXCS, call reporting distinguishes between *call detail* data, which records every call made to, out of, and within the MAXCS system, and *RTM* data, which is workgroup-related statistical data captured from the real-time monitoring function used in the MaxSupervisor client application. Both types of data can be set up for call reporting, or logging, although their storage systems are different.

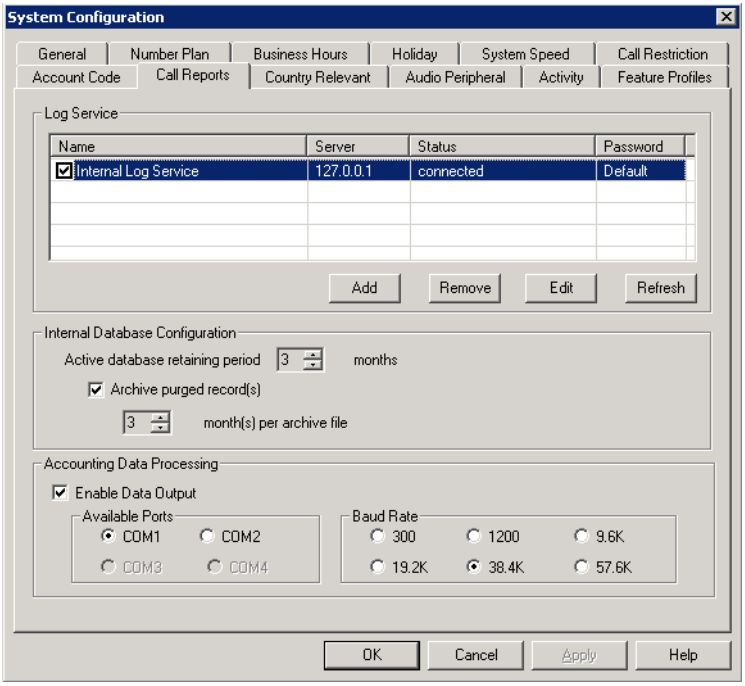
- **Call detail data** can be logged to your local drive, to a remote server, and/or exported via a COMM port.
- **RTM data** is always logged to your local drive.

Data logged to your local drive is stored in a directory called **AltiDB,** which is located by default on the root of the drive where MAXCS is installed. Files are stored in .mdb format.

Backups, if you choose to make them, are created in a subdirectory called **DBBackup,** which in turn contains three subdirectories: **MCDR** for Advanced Call Data, **RTMCALL** for Call Data, and **RTMDATA** for RTM data. These three types of data have separate report screens in the CDR Search client, and are described in the CDR documentation.

To set up and use call reports, in MaxAdministrator select **System > System Configuration**, then click the **Call Reports** tab.

.

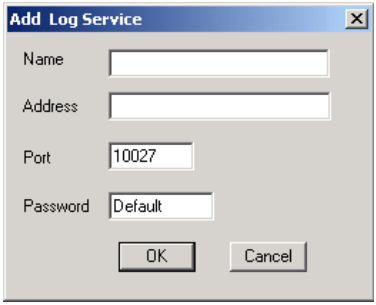


When **RTM Data - MDB** is selected, the **Config** button opens a dialog box where the user can enable and configure these records.

Internal Database Configuration (Internal Logger Service)

To set up and enable CDR collection to the local drive, click the **Add** button.

.



Add a **Name** and IP **Address** for the Internal Log Service, then click **OK**.

In the **Internal Database Configuration** section, select the **Active database retaining period** in months. Check the **Archive purged record(s)** field and select the number of months per archive file if you wish to archive purged Internal Logger Service records.

External (Remote) Logging of Call Data

MAXCS allows you to output call accounting to a Microsoft SQL database (see “Hardware Requirements” for databases supported).

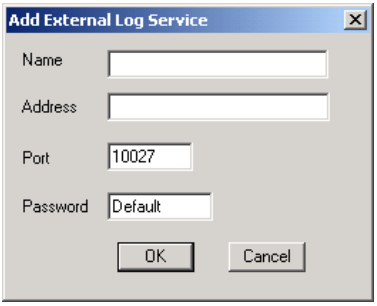
The database cannot be on the same server as the MAXCS system. A system integrator or database developer will need to write a custom query to extract data from the SQL database.

You can send reports from a number of different MAXCS systems to the same database.

Note: Before you enable external logging using this window, you need to set up and configure the database. It should be ready to receive the reports before you enable the export here.

Note: AltiGen does not provide any SQL backup and restore utility. We strongly recommend that you use SQL Backup and Maintenance utility to perform daily backup and maintenance jobs, and use a restore utility to restore the database. If you need to reconstruct the SQL server, run the External Logger Setup to create an empty calldb database before restore.

To set up and enable RTM data collection to the local drive, click the **Add** button.



Add a **Name** and IP **Address** for the External Log Service, then click **OK**.

Call Center Events and CDR

In call detail recording, every individual call is tracked from its start time to its end time. An incoming trunk call, for instance, starts with auto-attendant answer. The auto attendant/IVR offers the caller specific routing choices, and/or collects information to intelligently route a call. Queuing, if it happens, starts with the call leaving the auto attendant/IVR, includes ring time of the agent phone, and ends when an agent answers the phone. Disconnects (call abandons) can happen at any time during the process. All of this activity is summarized under talk time and wrap-up time. It is searchable via the “CDR” and “WG CDR” tabs of the CDR Search client.

Past and Present CDR

Database Schema. The CDR data schema has been redesigned and streamlined. If you have a reporting package using past versions of AltiGen’s CDR or SMDR, the reporting package vendor will have to rewrite the reporting program to work with the new schema.

Rate Tables. AltiWare 4.0 and higher, and MAXCS 6.0 and higher, do not support rate tables, unlike previous releases. This function must now be obtained by external applications found in reporting tools. The CDR database has sufficient information to support rate and charge evaluation by external applications.

Migration. If you are upgrading from OE 4.5 or earlier, you will not be provided with any conversion tool for CDR records stored under OE 4.5 or prior releases.

Extension-to-Extension Call Reporting. CDR Search includes records for internal calls between extensions, and from internal extensions to workgroups. This is in addition to information on incoming and outgoing trunk calls.

SMDR Cautions. SMDR is a Mitel-defined data schema for delivering basic call information out the RS232 serial port to external recording and reporting applications. While AltiGen has provided an SMDR interface, it has had many problems in terms of accuracy and consistency of information delivery. SMDR is **not** CDR. CDR is historical, and is a database containing call records. SMDR is a real time delivery of a subset of this information. We recommend that you use the new CDR, not the SMDR, for reporting and billing applications. No improvements or corrections have been made to SMDR.

Configuration Areas Affecting CDR Information

How calls are routed in outcall routing is reflected in the CDR record. The route names configured in MaxAdmin will appear in the route table name area of the records.

Multi-Project Naming

Each extension table entry in MaxAdmin has a field to identify the extension owner. If a name is placed in this field, that name will be used in the CDR record to represent the project or department associated with the particular extension.

Wrapup

Setting the wrapup time or supporting AltiX ActiveX controls can affect the level of CDR information. For example, using ActiveX for AltiLinkPlus, a client application can place wrapup data into the User Defined data field of the CDR record. This is useful if the user wants to correlate business information with call handling information; revenue achieved versus talktime by agent. A system integrator is required to use AltiGen's AltiX ActiveX control.

Ring No Answer Configurations and VM

Agents sign on to workgroups and answer calls. On occasion, an agent might be signed on but walk away from their station. Under these conditions, MaxAdmin allows the administrator to define what MAXCS should do if it encounters a Ring No Answer condition on a phone.

For example, the call can be sent to voice mail, to another agent, back to queue, or to auto attendant/IVR. How this configuration is set up determines the types of CDR records that will be recorded for this condition. Since MAXCS tracks all incoming calls from a trunk to an extension, this also applies to calls routed to regular extensions, not just workgroups.

Login and Logout

The CDR records database also supports a special record type. This record type records when agents login and logout from a workgroup. The information tells only when the action has taken place and which agent logged in and out. Therefore, a reporting program should always check to see if the record it is using or examining is for login/logout or for tracking the nature of a call. An agent login/logout record should have the agent's extension number and PAD information.

Changing Time Settings

If an administrator changes the time setting in Windows, it will affect active calls' CDR records. It may cause large, negative or zero talk time in CDR records.

Using CDR Search

CDR client offers three ways to search call records.

- **CDR Search** lets you define a search by the type of call, incoming or outgoing. To perform this search, you must log in as the administrator.
- **Group CDR** lets you specify a search by workgroup. To perform this search, you can log in as the administrator or as a workgroup supervisor.
- **WG Statistics** lets you search workgroup call data captured from the real-time monitoring functions in the **Workgroup Statistics** tab of the MaxSupervisor client. To perform this search, you can log in as the administrator or as a workgroup supervisor.

Logging In

There are two ways to log in to CDR search:

Administrator login lets you perform all three types of searches described above. To log in as an administrator, your extension must be designated as the Manager Extension in MaxAdmin. See your system administrator for details.

Workgroup supervisor login lets you run a Group CDR search or a WG Statistics search. To log in as a workgroup supervisor, the option-pack license must be installed on the server. For information on obtaining a license, contact your authorized AltiGen dealer.

Before you log in

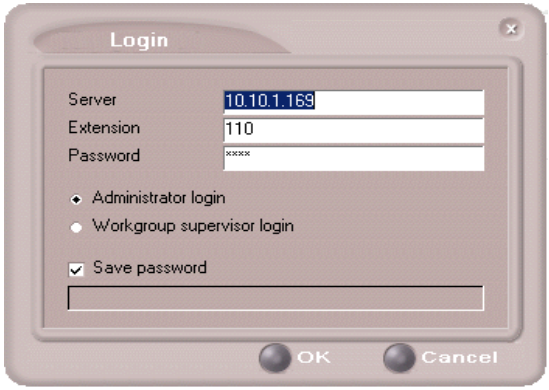
When you log in for the first time, you need to know either the IP address or the name of the server you'll be linking to. (If you use the server name rather than the IP address, CDR Search replaces the name with the IP address the next time you log in.)

To obtain the IP address, ask your system administrator.

Note: If you are connecting to the Internet through a modem, establish a connection from your computer to your ISP before you log in to CDR search.

Logging in - Administrator Login

1. From the Windows **Start** menu, select **Programs** > **CDR Search** > **CDR Search 7.0** Update 1.

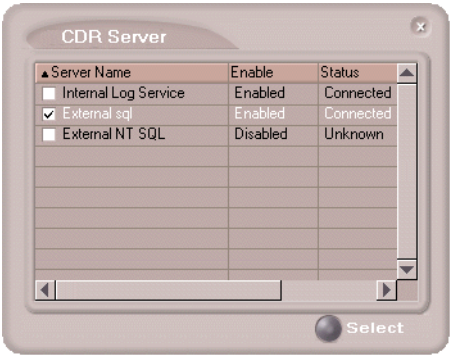


2. Enter the IP address or name of the **Server**.
3. Enter your **Extension** and **Password**.

   Check the **Save password** check box to store your login password for the next time you access CDR Search.

   Note: AltiServ maintains a counter for each extension to track login failures. Up to 8 login attempts are allowed, after which login will be disabled from 1 to 24 hours (depending on the MaxAdmin setting).

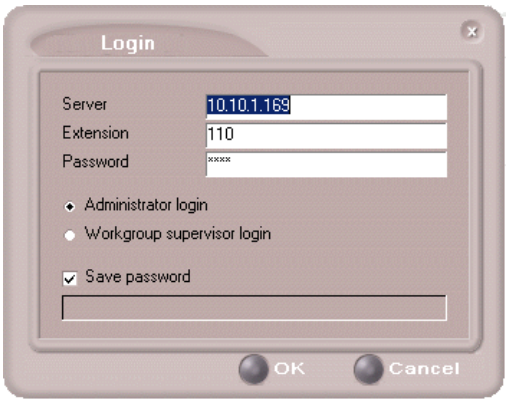
4. Select **Administrator login** and click **OK**.
5. In the **CDR Server** dialog box, select the database containing the data you want to access, then click **Select**.



Note: This option is available only when the external logger service is installed on the SQL Server, and External CDR Logging is enabled. Consult your system administrator for more information.

Logging in - Workgroup Supervisor Login

1. From the Windows **Start** menu, select **Programs** > **CDR Search** > **CDR Search 7.0 Update 1**.

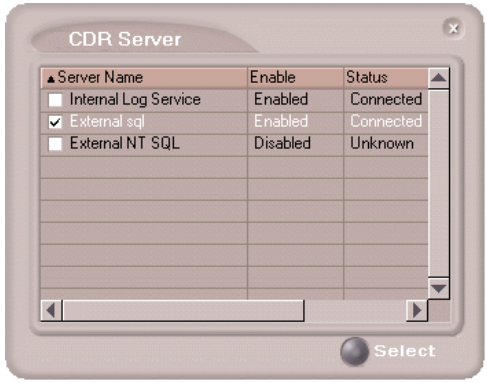


2. Enter the IP address or name of the **Server**.
3. Enter your **Extension** and **Password**.

   Check the **Save password** check box to store your log in password for the next time you access CDR Search.

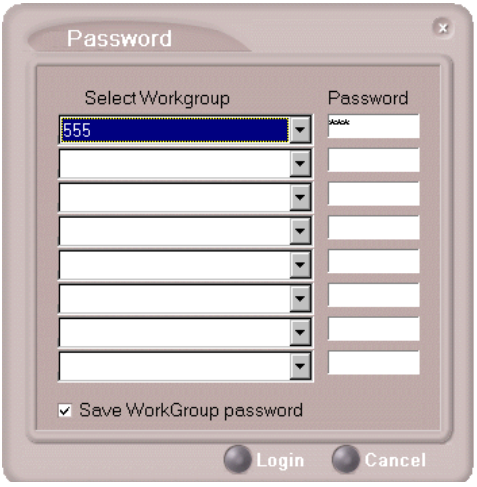
Note: AltiServ maintains a counter for each extension to track login failures. Up to 8 login attempts are allowed, after which login will be disabled from 1 to 24 hours (depending on the settings in MaxAdmin).

4. Select **Workgroup supervisor login,** and click **OK.**
5. In the **CDR Server** dialog box, select the database containing the data you want to access, then click **Select**.



Note: This option is available only when the external logger service is installed on the SQL Server, and External CDR Logging is enabled. Consult your system administrator for more information.

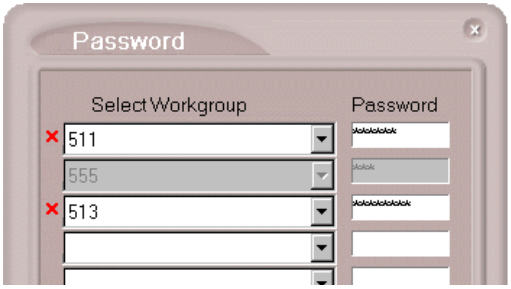
6. In the Password panel that opens, select the workgroups you want, enter the password for each, and click **OK** to open the CDR Search main window.



This will allow access to the workgroup CDR and workgroup statistics.

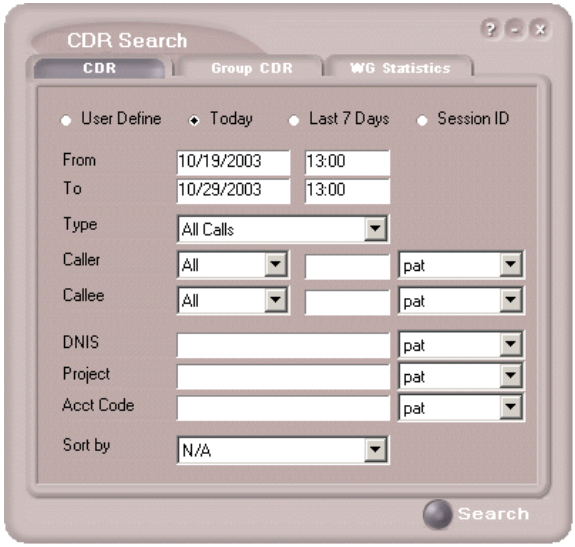
If you enter an invalid password, the Password window reopens. A red X appears before the problem workgroup. Re-enter the password and click **OK.**

For multiple workgroups: If you re-enter an invalid password for *one* workgroup, the CDR Search main window will open, but the workgroup will not appear in the **Workgroup** list and thus will not be available as a search criterion.



Running a Search

The CDR Search main window has three tabs: **CDR**, **Group CDR**, and **WG Statistics**.

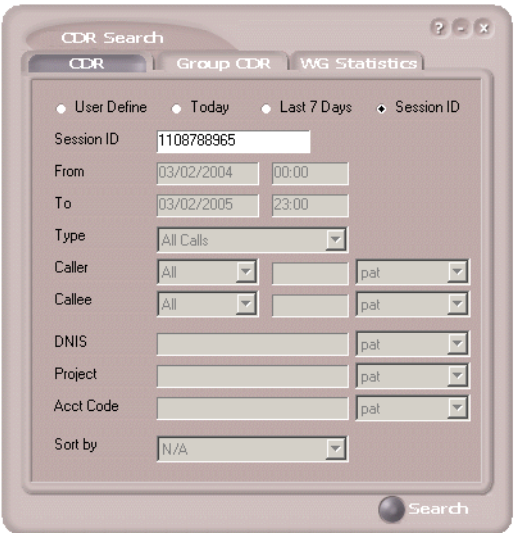


CDR Search

CDR Search lets you search all calls, internal and external. To perform this search, you must log in as the administrator.

1. Select the time range for the search:
   - **User Define**—the From/To fields default to a range that includes the 10 previous days. Edit the date and time for a custom range.
   - **Today**—sets the From/To fields to the current date.
   - **Last 7 Days**—sets the From/To range to the previous seven days.
   - **Session ID**—searches calls by Session ID.
2. Select the **Type** of search:

   Note: If searching by **Session ID**, enter a Session ID number in the blank field, then press the **Search** button.



- **All Calls—**calls involving: Auto Attendant/IVR, Ring No Answer, Queue, Voice Mail (no VM recorded or VM recorded), Connect, Logon, Logoff, All Trunks Busy, No session, VM Access, Forward, Transfer, VM Notify, WG Abandoned, Park, System Park, Conference, Call Monitor, Transfer Cancel, Call Redirect, Call Pick Up, Dial Cancel
- **Connected Calls & Messages**—Connected Calls plus Messages (see below)
- **Connected Calls**—incoming calls answered by a person, and outgoing calls that entered "Connected" state

  Note: For CDR records, Connected Calls refer to calls in these states: connected, transfer, park, system park, conference call and transfer cancel.
- **Messages**—incoming calls directed to voicemail
- **Unanswered Calls**—incoming or outgoing calls not answered by a person

Note: For CDR records, Unanswered calls refer to calls abandoned while in these states: AA, forward, RNA, queue, voicemail, WG abandoned, call redirect, no more session, pick up by and dial cancel. Calls abandoned also include all calls routed to go somewhere other than a workgroup, where a workgroup has busy call handling set not to queue.

- **All Trunks Busy**—outgoing calls aborted due to busy signals

Note: See Table 9, “CDRMAIN" for call data details.

3. Define the type of calls in the Caller/Callee fields and enter values for the Trunk and Extension, if applicable.

   - **All**—searches for both incoming and outgoing calls
   - **To search for outgoing calls only**—set Caller to Extension and Callee to Trunk, then enter the appropriate numbers
   - **To search for incoming calls only**—set Caller to Trunk and Callee to Extension, then enter the appropriate numbers
   - **To search for internal (station to station) calls**—set Caller and Callee to Extension

   Use the drop down lists (located to the right of the **Caller** and **Callee** value fields) to further define the value match for your record search:

   - **Exact** - retrieves records that exactly match the field value entered
   - **Like** - retrieves records that begin with the field value entered
   - **Pat** - retrieves records that contain the field value in any part of the extension/trunk digits.

   Example: “252” is the Callee value entered in the blank field. If **exact** is selected, any record with only “252” in the Callee field is retrieved. If **like** is selected with this value, any records where “252” begins the Callee field (for example, **252**-9712, **252**-9713) is retrieved. If **pat** is selected with this value, any records with “252” in any part of the Callee field is retrieved (for example, **252**-9712, 946-**252**5).

4. In the search criteria fields, enter data for **DNIS, Project,** or **Acct Code** as desired.

   Use the drop-down lists (located to the right of the **DNIS, Project** and **Acct Code** value fields) to further define the value match for your record search:

- **Exact**—retrieves records that exactly match the field value entered
- **Like**—retrieves records that begin with the field value entered
- **Pat**—retrieves records that contain the field value in any part of the DNIS/Project/Acct Code digits.

5. Select to **Sort by:**
   - **Date/Time**—sorts day-by-day (or hour-by-hour if you select Today as the time range for the search).
   - **Extension**—sorts by extension.
   - **Trunk**—sorts by trunk.
   - **N/A**—search without sorting, retrieves total number of records.

     Note: For faster searching, using **N/A** to sort records is recommended.

     (For example, when you search for Connected Calls, the time range as "Today," and sorting by N/A, CDR will retrieve the total number of connected calls for "today."

Note: If the time range for the search is less than 1 day, and Date/Time is selected for Sort by, CDR will list records hourly. If time range for the search is longer than 1 day, and Date/Time is selected for Sort by, CDR will list records daily.

6. Click **Search.** During the search, a progress window opens.

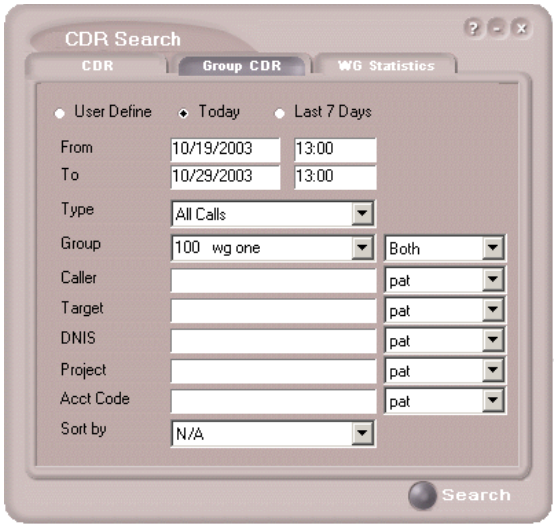
   .

   To cancel the search, click **Cancel.**

7. Search results appear in the **Summary** window. Refer to "Search Results" for details on working with search results.

Group CDR Search

Group CDR search lets you specify a search by group. To perform this search, you can log in as the administrator or as a workgroup supervisor.



1. Select the time range for the search:
   - **User Define**—the From/To fields default to a range that includes the 10 previous days. Edit the date and time for a custom range.
   - **Today**—sets the From/To fields to the current date
   - **Last 7 Days**—sets the From/To range to the previous seven days
2. Select the **Type** of search:
   - **All Calls—**calls involving: Auto Attendant/IVR, Ring No Answer, Queue, Voice Mail (no VM recorded or VM recorded), Connect, Logon, Logoff, All Trunks Busy, No session, VM Access, Forward, Transfer, VM Notify, WG Abandoned, Park, System Park, Conference, Call Monitor, Transfer Cancel, Call Redirect, Call Pick Up, Dial Cancel

     Note: When searching for All Calls in WG CDR, the search results will not include workgroup agent login/logout, as the system does not recognize logging in/out as a call.
   - **Connected Calls & Messages**—Connected Calls plus “Messages” (see below)

- **Connected Calls**—incoming calls answered by agent and outgoing calls made by agent (when an **Outgoing Workgroup** is selected for the agent in the Workgroup Extension Configuration in MaxAdministrator).
- **Messages**—calls directed to voicemail
- **Unanswered Calls**—incoming calls not answered by agent or workgroup (abandoned in AA, forward, RNA, queue, voicemail, WG abandoned, call redirect, no more session, pick up by and dial cancel). Calls abandoned also include all calls routed to go somewhere other than a workgroup, where a workgroup has busy call handling set not to queue.
- **All Trunks Busy**—outgoing calls aborted due to busy signals
- **Agent Login/out**—calls sorted by the login/out times of workgroup member extension numbers

Note: See Table 9, “CDRMAIN" for call data details.

3. Select the **Workgroup** whose call records you want to search.
4. In the search criteria fields, enter data for **Caller, Target, DNIS, Project,** or **Acct Code** as desired.

   Use the drop-down lists (located to the right of the **Caller, Target, DNIS, Project** or **Acct Code** value fields) to further define the value match for your record search:

   - **Exact**—retrieves records that exactly match the field value entered
   - **Like**—retrieves records that begin with the field value entered
   - **Pat**— retrieves records that contain the field value in any part of the extension/trunk digits.
5. Select to **Sort by:**
   - **Date/Time**—sorts day-by-day (or hour-by-hour if you select Today as the time range for the search)
   - **Agent**—sorts by agent
   - **Workgroup**—sorts by workgroup
   - **Trunk**—sorts by trunk
   - **N/A**—search without sorting, retrieves total number of records.

     Note: For faster searching, using **N/A** to sort records is recommended.

(For example, when you search for Connected Calls, the time range as “Today,” and sorting by N/A, CDR will retrieve the total number of connected calls for “today.”

Note: If the time range for the search is less than 1 day, and Date/Time is selected for Sort by, CDR will list records hourly. If time range for the search is longer than 1 day, and Date/Time is selected for Sort by, CDR will list records daily.

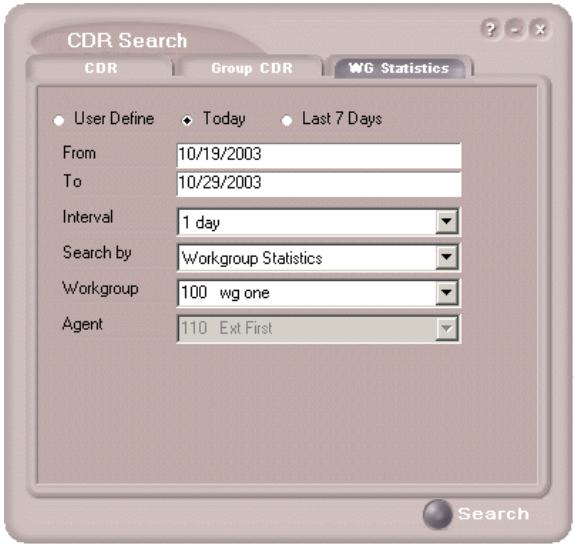
6. Click **Search.** During the search, a progress window appears.
7. To cancel the search, click **Cancel.**

Search results appear in the Summary window. Refer to “Search Results” on page 25 for details on working with search results.

Workgroup Statistics Search

Workgroup Statistics lets you search workgroup call data (rtmData.mdb records) captured from the real-time monitoring function in the Workgroup Statistics tab of the MaxSupervisor client. To perform this search, you can log in as the administrator or as a workgroup supervisor

.



1. Select the time range for the search:
   - **User Define**—the From/To fields default to a range that includes the 10 previous days. Edit the date and time for a custom range
   - **Today**—sets the From/To fields to the current date
   - **Last 7 Days**—sets the From/To range to the previous seven days
2. Select the **Interval** (1 day, 1 hour, or 15 minutes) to specify the granularity of your search results.

   Note: This selection is overridden by the interval setting in MaxAdmin. If your search results produce greater intervals than you specified, consult your system administrator.
3. Select the type of search:
   - **Workgroup Statistics**—statistics on a specific workgroup
   - **Agent Statistics per Workgroup**—statistics on a specific agent for a specific workgroup
   - **Agent Statistics**—statistics on a specific agent for every workgroup to which the agent belongs

   Note: See “CDR Search / Group CDR Search Results: Summary Window” on page 47 for workgroup statistics call data details.
4. Depending on the type of search you selected, specify a **Workgroup** and/or **Agent** to search on.
5. Click **Search.** During the search, a progress window appears. To cancel the search, click **Cancel.**

   Search results appear in the Statistics window. Refer to “Search Results” on page 25 for details on working with search results.

Search Results

The type of search you perform determines the type of results you see:

- **Summary (**which also enables drilldown to call **Details** and **Records** windows)
- **Statistics**

All Results windows have the following buttons:

- **Export**—exports selected calls to a csv file. Refer to “Exporting Records” for details.

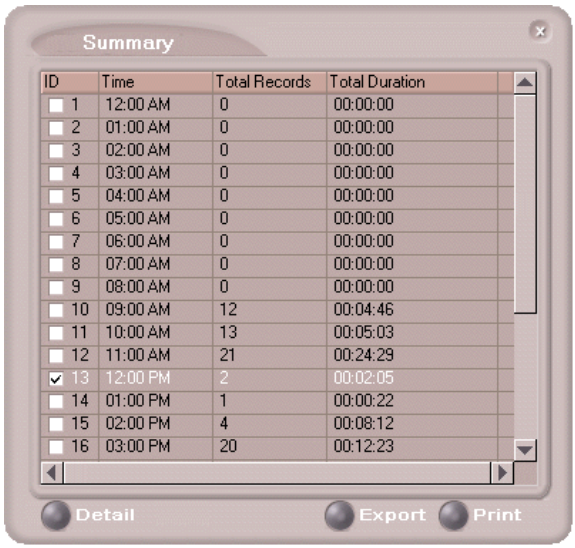
- **Print**—prints the selected calls. Refer to “Printing Records” for details.

All Statistics windows (WG, Agent Statistics Per WG, Agent) also have a **Stop** button.

For explanations of records and database schema, see “Records and Data Schema” .

Summary (CDR Search and Group CDR Search)

For CDR Search and Group CDR Search, the Summary window displays the results.

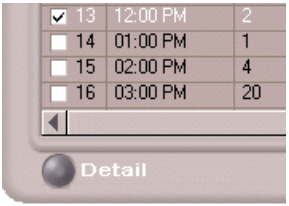


- The **Detail** button opens the Detail window for a selected call. Refer to “Call Details” for details.

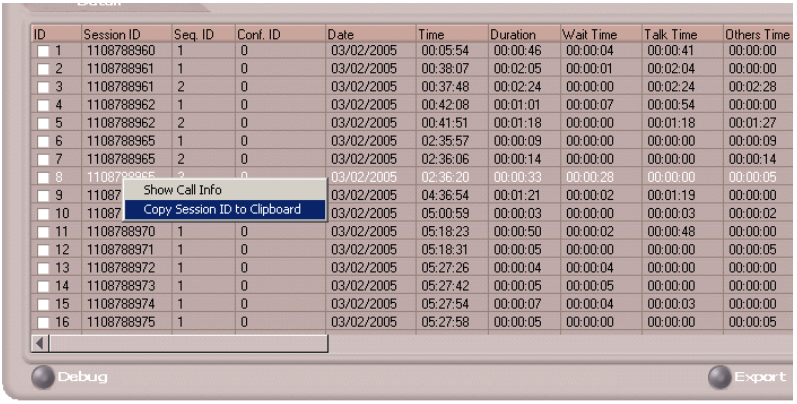
Call Details

You can drill down for detailed information on call records.

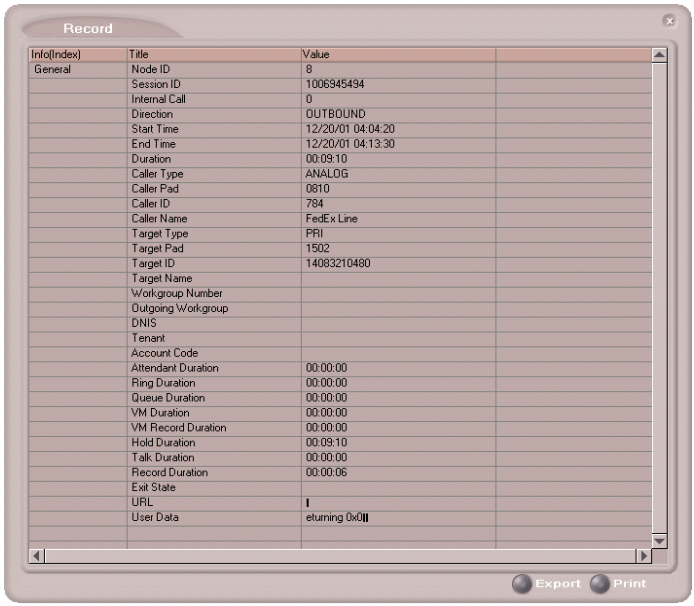
1. To see details on a call, select a record in the Summary window and click **Detail.**



   The Detail window opens.



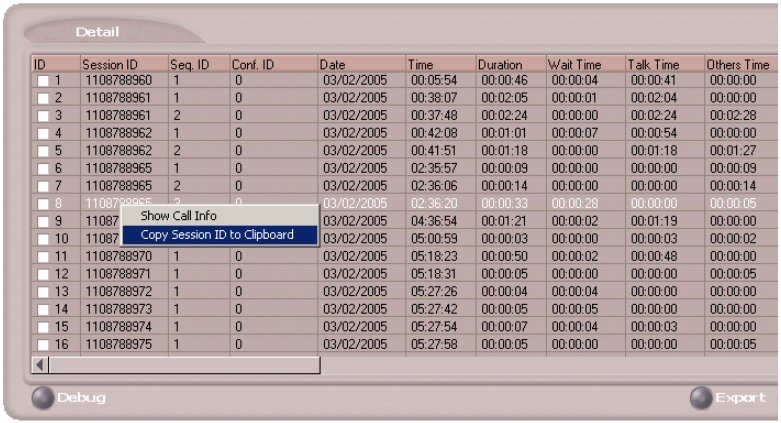
2. To view call records, right-click a record in the Detail window and select **Show Call Info**.



Session ID Call Details

When searching by Session ID, the following window shows search results.

For detailed information on this call record, select the record and click the **Detail** button.



Right-clicking on an entry opens a drop-down menu to **Show Call Info** or **Copy Session ID to Clipboard**.

Statistics (WG Statistics)

For Workgroup Statistics searches, the Statistics windows display the results of your search.

There are different windows for the three types of WG Statistics searches you can perform.

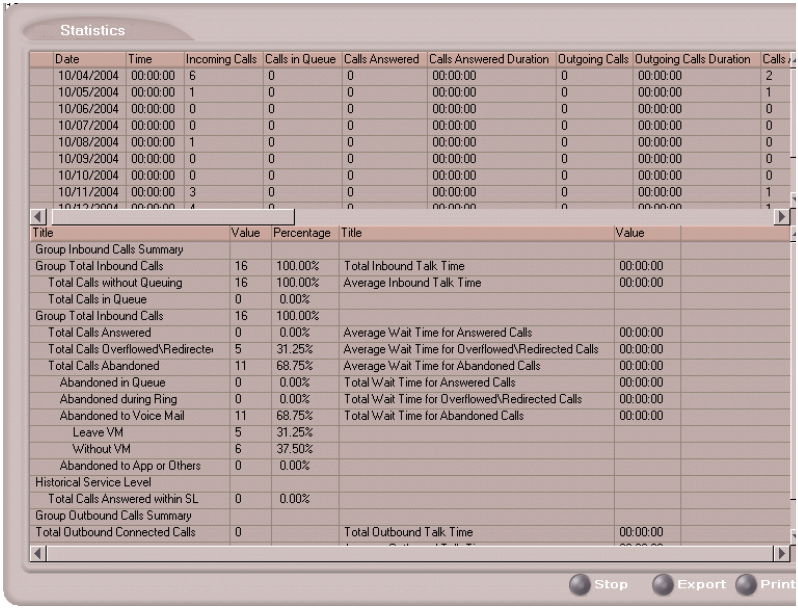

Statistics
Date Time Incoming Calls Calls in Queue Calls Answered Calls Answered Duration Outgoing Calls Outgoing Calls Duration
10/04/2004 00:00:00 6 0 0 00:00:00 0 00:00:00 2
10/05/2004 00:00:00 1 0 0 00:00:00 0 00:00:00 1
10/06/2004 00:00:00 0 0 0 00:00:00 0 00:00:00 0
10/07/2004 00:00:00 0 0 0 00:00:00 0 00:00:00 0
10/08/2004 00:00:00 1 0 0 00:00:00 0 00:00:00 0
10/09/2004 00:00:00 0 0 0 00:00:00 0 00:00:00 0
10/10/2004 00:00:00 0 0 0 00:00:00 0 00:00:00 0
10/11/2004 00:00:00 3 0 0 00:00:00 0 00:00:00 1
Title Value Percentage Title Value
Group Inbound Calls Summary
Group Total Inbound Calls 16 100.00% Total Inbound Talk Time 00:00:00
Total Calls without Queuing 16 100.00% Average Inbound Talk Time 00:00:00
Total Calls in Queue 0 0.00%
Group Total Inbound Calls 16 100.00%
Total Calls Answered 0 0.00% Average Wait Time for Answered Calls 00:00:00
Total Calls Overflowed\Redirecte 5 31.25% Average Wait Time for Overflowed\Redirected Calls 00:00:00
Total Calls Abandoned 11 68.75% Average Wait Time for Abandoned Calls 00:00:00
Abandoned in Queue 0 0.00% Total Wait Time for Answered Calls 00:00:00
Abandoned during Ring 0 0.00% Total Wait Time for Overflowed\Redirected Calls 00:00:00
Abandoned to Voice Mail 11 68.75% Total Wait Time for Abandoned Calls 00:00:00
Leave VM 5 31.25%
Without VM 6 37.50%
Abandoned to App or Others 0 0.00%
Historical Service Level
Total Calls Answered within SL 0 0.00%
Group Outbound Calls Summary
Total Outbound Connected Calls 0 Total Outbound Talk Time 00:00:00
Stop
Export
Print

Figure 1. The Workgroup Statistics window

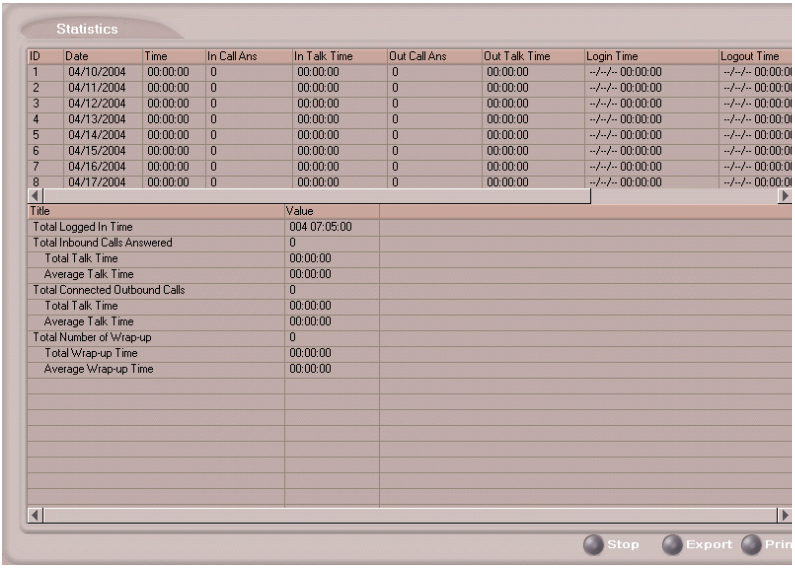


Figure 2. The Agent Statistics per Workgroup window

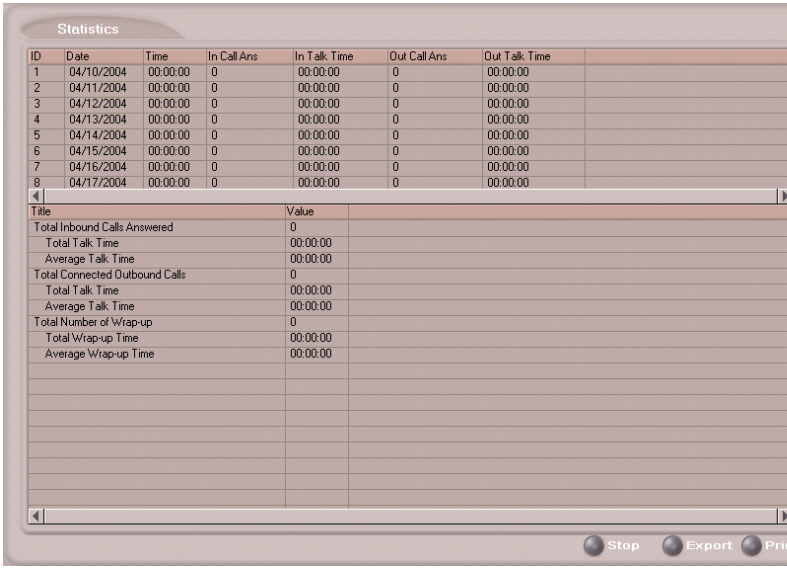


Figure 3. Agent Statistics window

Exporting Records

You can export records in csv format from the Statistics, Summary, Detail, and Record windows.

To export records from the Statistics window:

1. Click **Export.**
2. Click **OK** to open the Save As dialog box.

To export records from the Summary, Detail, and Record windows:

1. Do one of the following:
   - To export specific records, select the records you want, then click **Export.** In the Select window that appears, select **Export only selected records.**
   - To export all records, click **Export.** In the Select window that appears, select **Export All Records.**
2. Click **OK** to open the Save As dialog box.

Printing Records

You can print records from the Statistics, Summary, Detail, and Record windows.

To export records from the Statistics window:

1. Click **Print.**
2. Click **OK** to open the Windows Print dialog box.

To print records from the Summary, Detail, and Record windows:

1. Do one of the following:
   - To print all records, click **Print.** In the Select window that appears, select **Print out all records.**
   - To print specific records, select the records you want, then click **Print.** In the Select window that appears, select **Print out only selected records.**
2. Click **OK**.

CHAPTER 4

Data Storage

MAXCS can store data using either an Internal Logger Service (ILS) or up to two External Logger Service (ELS). CDR Search can use either ILS or CDR to search stored data.

Call detail record data (CDR) and workgroup-related statistical data (RTM) are stored in the same database but in different tables. These two storage systems are described below.

Common Features of ILS and ELS

- Status can be monitored in MaxAdmin through the bottom of the Main Window or through the Call Report window (**System** > **Call Report**)
- Broken and reconnection mechanism implemented on:
  - TCP connection between MAXCS/ACM and Logger Service
  - Database connection between Logger Service and database

  When the connection is broken, the sender will cache all data to the first-in-first-out buffer. The sender will try to reconnect the receiver automatically. Once the connection is back, all data will be sent. The buffer is stored in memory and hard disk. The size limitation of each buffer is 1G (data for approximately two months), or free size of hard drive is less than 512 MB, whatever is met first. When the buffer is overflowed, the earliest data is dropped.
- Auto check and upgrade database at startup—when Logger Service starts, it performs the following:
  1. Compares CDR structure with the current database used by configuration.
  2. If they are the same, there is no change.
  3. If they are different, and the data can be upgraded, it will be automatically upgraded.
  4. If the database cannot be upgraded, it will rename the old database and create a new database; the new database will then be used to store data.

- Status monitoring of connection between MAXCS and Logger Service—User Database ID and Client ID can be used to verify connection to Logger Service. “Database ID” is fixed to “Default” and cannot be found on any GUI. “Client ID” is mentioned as “Password” in MaxAdmin and External Logger Service Configuration. If the verification fails, the status of the Logger Service is “Invalid Password,” which can be monitored by the administrator.
- If no database is set up correctly, or the database is shut down when Logger Service is starting, it will be stopped.

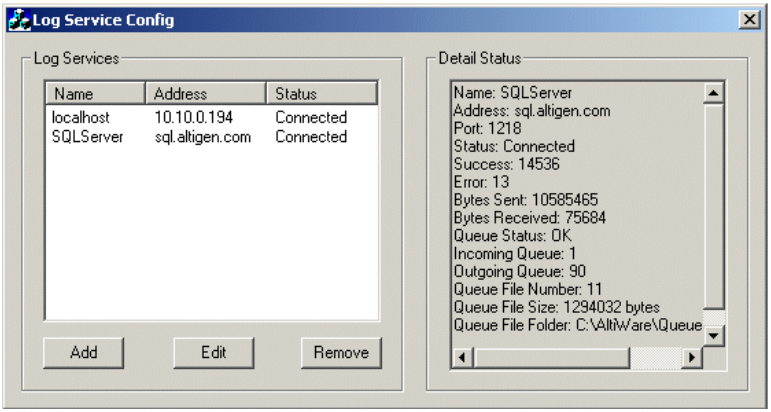
Differences between ILS and ELS

- Internal Logger Service
  - Implements auto retain and backup mechanism (1-12 months)
  - Only MAXCS/MaxAdmin within the same computer can connect to the Internal Logger Service.
- External Logger Service
  - Supports Microsoft SQL Server (see “Hardware Requirements” for versions supported)
  - No retain/backup mechanism
  - Any computer can connect to the server (TCP port 10027)
  - Any number of MAXCS systems with different System IDs can connect to the same Logger Service. If two MAXCS systems with the same System ID try to connect to the same Logger Service, the second Logger Service will get a “System ID conflicted” error.
  - When ELS is installed within Microsoft SQL Server, the installation program will create the database, ODBC configuration, and other configuration by default. If it is installed to work with remote SQL, the customer must manually configure the Logger Service first.

Logger Service Configuration

MaxAdmin can configure CDRLogDLL, add (register) and remove New Logger Server for MAXCS remotely, but they cannot configure Logger Server.

In order to implement remote manager ability, a Log Service configuration window can be accessed in MaxAdmin.



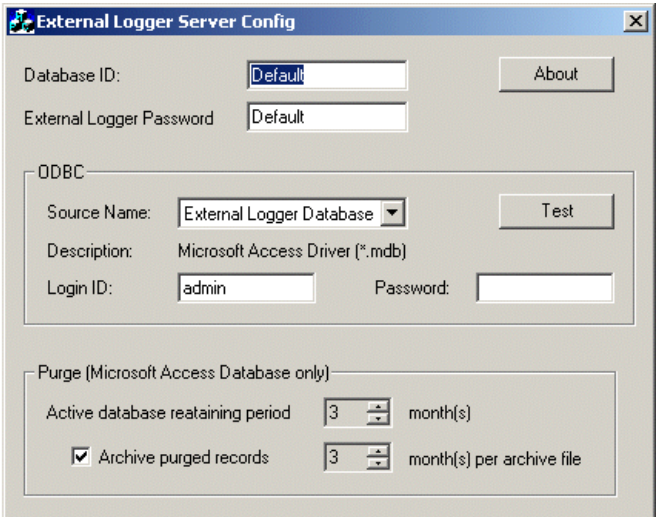
Use the Log Service Configuration window to **Add**, **Edit** and/or **Remove** a Log Service.

External Logger Server Configuration Tool

The External Logger Configuration Tool is used to configure Logger Server. Currently, all configurations are saved into registry, so any change in configuration will not work unless Logger Service is restarted. When the configuration is changed, the Configuration Tool will automatically restart Logger Service.

Note: There is no configuration tool for Internal Logger Server because all parameters are fixed.

Configuration GUI for External Logger Server



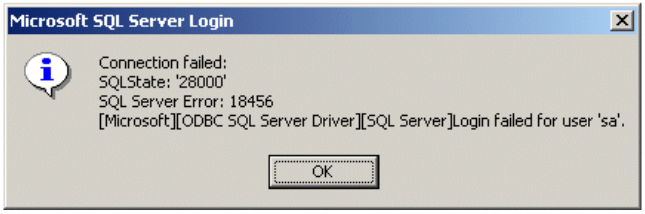
For ELS, only **Database ID**, **Password**, **ODBC Source Name**, **Login ID** and **Password** are configurable. Other parameters, such as **TCP port** and **buffer folder**, cannot be changed. If the database is a **Microsoft Access Database**, ELS can purge and back up the database on demand.

Testing the DB Dialog

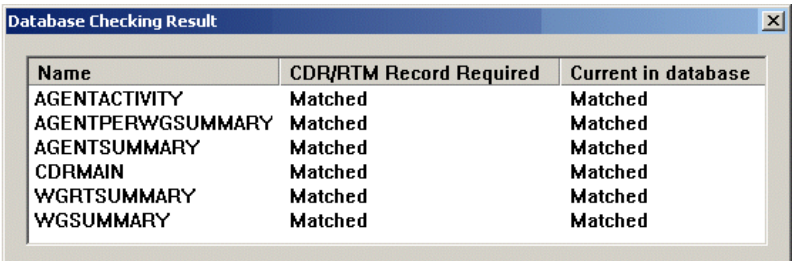
The **Test** button is used for testing and diagnosing the ODBC database. It can test whether the ODBC source, Login ID and password are correct and that the CDR/RTM tables of the database are compatible with the current Logger Server.

Important: It is strongly recommended that you run this test after you have changed any database parameters.

If the configuration tool cannot connect to the ODBC source, it will pop up the following dialog boxes to report error information and to re-input login information.



When the ODBC information is correct, the tool will check all tables required and will try to find all differences. If the database in not compatible, the **OK** button will be disabled.



Name	CDR/RTM Record Required	Current in database
AGENTACTIVITY	Matched	Matched
AGENTPERWGSUMMARY	Matched	Matched
AGENTSUMMARY	Matched	Matched
CDRMAIN	Matched	Matched
WGRTSUMMARY	Matched	Matched
WGSUMMARY	Matched	Matched

Limitations

- One Internal Logger Server per computer.
- One External Logger Server per computer.
- One Super Logger Server per computer.
- One Internal, External and Super Logger Server can be installed in the same computer.

- One MAXCS can only output data to, at most, one Internal Logger Server and two External Logger Servers.
- Internal Logger Server only serves MAXCS of same computer.
- Internal Logger Server only supports Microsoft Access Database.
- Internal and External Logger Server do not support multiple databases.
- One Database Connection license is required for every Logger Server and every CDR Search requires one additional license.
- External Logger Configuration tools cannot run remotely.
- 100 commands per second on every TCP or database connection.
- Maximum 1 GB buffer files for every buffer; otherwise, always keep 500 MB free hard drive space. (When free space is below 500 MB, the buffer files will be truncated automatically.)

CHAPTER 4

CDR / Workgroup CDR Search: Typical Searches

This section contains examples of how to run various CDR and Workgroup CDR searches that are typically used by call centers. Identify the type of search you would like to perform, go to the CDR Search main window, define the search date, set the fields and settings as directed, then click the Search button to run the search.

Note: Connected Calls include Connected Calls, Transferred Calls and Conference Calls.

All includes Auto Attendant/IVR, Ring No Answer, Queue, Voice Mail (no VM recorded or VM recorded), Connect, Logon, Logoff, All Trunks Busy, No session, VM Access, Forward, Transfer, VM Notify, WG Abandoned, Park, System Park, Conference, Call Monitor, Transfer Cancel, Call Redirect, Call Pick Up, Dial Cancel.

Unanswered Calls include calls abandoned while in these states: AA, Forward, RNA, Queue, Voicemail, WG abandoned, Call Redirect, No More Session, Pick Up By and Dial Cancel.

Example CDR Searches

To run a search on:	Use these fields and settings:
All outgoing trunk calls, system-wide	Set Type to Connected Calls Set Caller to All Set Callee to Trunk
All incoming trunk calls, system-wide	Set Type to Connected Calls Set Caller to Trunk Set Callee to Extension, enter particular extension, select Exact
All outgoing trunk calls for a particular extension	Set Type to Connected Calls Set Caller to Extension, enter particular extension, select Exact Set Callee to Trunk
All connected incoming trunk calls for a particular extension	Set Type to Connected Calls Set Caller to Trunk Set Callee to Extension, enter particular extension, select Exact
All internal and external calls from a particular extension	Set Type to Connected Calls Set Caller to Extension, enter the particular extension, select Exact Set Callee to All
All incoming (trunk to extension and trunk to trunk) calls (system-wide) originated by extensions	Set Type to Connected Calls Set Caller to Trunk Set Callee to All
All internal and external connected calls (system-wide)	Set Type to Connected Calls Set Caller to Extension Set Callee to All
All incoming calls to a particular extension from trunk	Set Type to All Set Caller to Trunk Set Callee to Extension
All internal calls	Set Type to Connected Calls Set Caller to Extension Set Callee to Extension

To run a search on:	Use these fields and settings:
All internal calls to/from a particular extension	Set Type to Connected Calls Set Caller to Extension, enter particular extension, select Exact Set Callee to Extension, enter particular extension, select Exact
All trunks busy	Set Type to All Trunks Busy Set Caller to All Set Callee to All

Example Workgroup CDR Searches

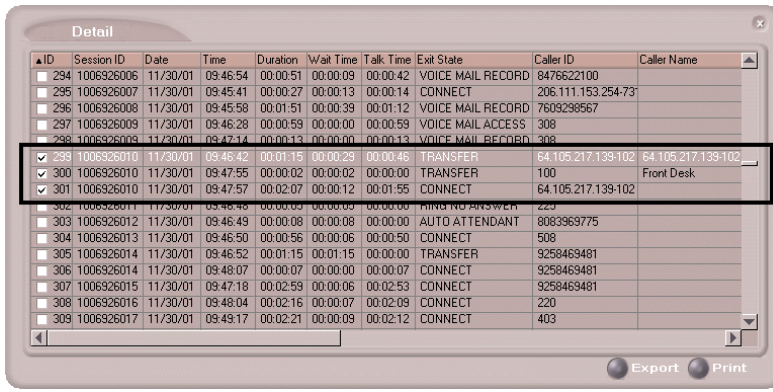
To run a search on:	Use these fields and settings:
All incoming workgroup calls per agent	Set Type to Connected Calls Enter Workgroup Number, select Inbound Set Sort By to Agent
All incoming workgroup calls per workgroup	Set Type to Connected Calls Enter Workgroup Number, select Inbound Set Sort By to N/A
All unanswered calls by workgroup	Set Type to Unanswered Calls Enter Workgroup Number, select Both Set Sort By to N/A or Date/Time
All workgroup voicemail messages by workgroup	Set Type to Messages Enter Workgroup Number, select Both Set Sort By to Workgroup
All calls to workgroup	Set Type to All Calls Enter Workgroup Number, select Both Set Sort By to N/A or Date/Time
All calls to workgroup via specific DNIS	Set Type to All Calls Enter Workgroup Number, select Both Enter DNIS digits, select Exact Set Sort By to Workgroup

To run a search on:	Use these fields and settings:
All trunks busy for workgroup trunks (for outbound calls)	Set Type to All Trunks Busy Enter Workgroup Number, select Outbound Set Sort By to N/A
All Unanswered Calls by Agent	Set Type to Unanswered Enter Workgroup Number, select Both Set Sort By to Agent

Example Call Sequences and their Effect on CDR Records

One objective of the CDR record is to track the talk time of agents and individuals for incoming and outgoing calls. Many call sequences are possible. The following are examples of inbound and outbound calls to a call center and sequences of recorded results in the CDR Detail report:

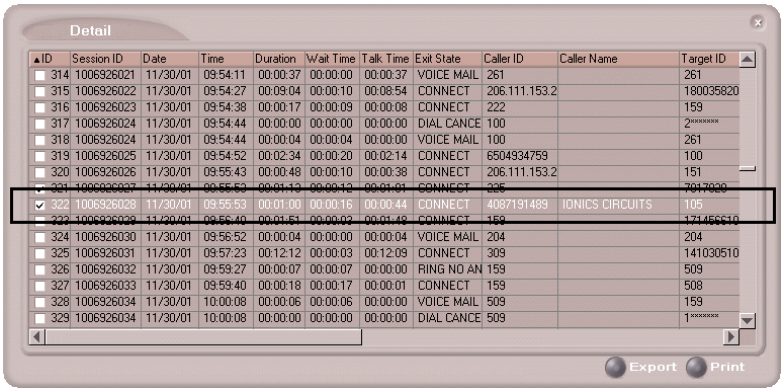
Example 1—Ext. 102 calls Operator, Operator transfers Ext. 102 to Ext. 309, Ext. is connect to Ext. 309. The result is three sessions logged for this event.



▲ID	Session ID	Date	Time	Duration	Wait Time	Talk Time	Exit State	Caller ID	Caller Name
294	1006926006	11/30/01	09:46:54	00:00:51	00:00:09	00:00:42	VOICE MAIL RECORD	8476622100	
295	1006926007	11/30/01	09:45:41	00:00:27	00:00:13	00:00:14	CONNECT	206.111.153.254-737	
296	1006926008	11/30/01	09:45:58	00:01:51	00:00:39	00:01:12	VOICE MAIL RECORD	7609298567	
297	1006926009	11/30/01	09:46:28	00:00:59	00:00:00	00:00:59	VOICE MAIL ACCESS	308	
298	1006926009	11/30/01	09:47:14	00:00:13	00:00:00	00:00:13	VOICE MAIL RECORD	308	
299	1006926010	11/30/01	09:45:42	00:01:15	00:00:29	00:00:46	TRANSFER	64.105.217.139-102	64.105.217.139-102
300	1006926010	11/30/01	09:47:55	00:00:02	00:00:02	00:00:00	TRANSFER	100	Front Desk
301	1006926010	11/30/01	09:47:57	00:02:07	00:00:12	00:01:55	CONNECT	64.105.217.139-102	
302	1006926011	11/30/01	09:46:46	00:00:03	00:00:03	00:00:00	RING NO ANSWER	220	
303	1006926012	11/30/01	09:46:49	00:00:08	00:00:08	00:00:00	AUTO ATTENDANT	8083969775	
304	1006926013	11/30/01	09:46:50	00:00:56	00:00:06	00:00:50	CONNECT	508	
305	1006926014	11/30/01	09:46:52	00:01:15	00:01:15	00:00:00	TRANSFER	9258469481	
306	1006926014	11/30/01	09:48:07	00:00:07	00:00:00	00:00:07	CONNECT	9258469481	
307	1006926015	11/30/01	09:47:18	00:02:59	00:00:06	00:02:53	CONNECT	9258469481	
308	1006926016	11/30/01	09:48:04	00:02:16	00:00:07	00:02:09	CONNECT	220	
309	1006926017	11/30/01	09:49:17	00:02:21	00:00:09	00:02:12	CONNECT	403	

Figure 1. CDR record sessions for Example 1

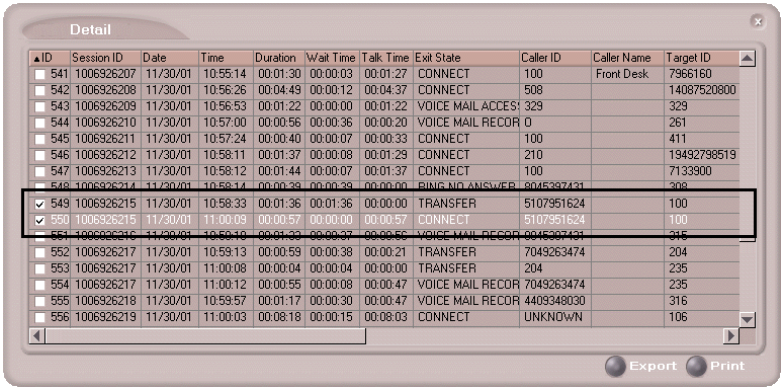
Example 2—External party calls and connects directly to Ext. 105. The result is one sessions logged for this event.



ID	Session ID	Date	Time	Duration	Wait Time	Talk Time	Exit State	Caller ID	Caller Name	Target ID
314	1006926021	11/30/01	09:54:11	00:00:37	00:00:00	00:00:37	VOICE MAIL	261		261
315	1006926022	11/30/01	09:54:27	00:09:04	00:00:10	00:08:54	CONNECT	206.111.153.2		180035820
316	1006926023	11/30/01	09:54:38	00:00:17	00:00:09	00:00:08	CONNECT	222		159
317	1006926024	11/30/01	09:54:44	00:00:00	00:00:00	00:00:00	DIAL CANCE	100		2********
318	1006926024	11/30/01	09:54:44	00:00:04	00:00:04	00:00:00	VOICE MAIL	100		261
319	1006926025	11/30/01	09:54:52	00:02:34	00:00:20	00:02:14	CONNECT	6504934759		100
320	1006926026	11/30/01	09:55:43	00:00:48	00:00:10	00:00:38	CONNECT	206.111.153.2		151
321	1006926027	11/30/01	09:55:53	00:01:13	00:00:13	00:01:01	CONNECT	225		7017020
322	1006926028	11/30/01	09:55:53	00:01:00	00:00:16	00:00:44	CONNECT	4087191489	IONICS CIRCUITS	105
323	1006926029	11/30/01	09:56:40	00:01:51	00:00:02	00:01:49	CONNECT	159		1714566319
324	1006926030	11/30/01	09:56:52	00:00:04	00:00:00	00:00:04	VOICE MAIL	204		204
325	1006926031	11/30/01	09:57:23	00:12:12	00:00:03	00:12:09	CONNECT	309		141030510
326	1006926032	11/30/01	09:59:27	00:00:07	00:00:07	00:00:00	RING NO AN	159		509
327	1006926033	11/30/01	09:59:40	00:00:18	00:00:17	00:00:01	CONNECT	159		508
328	1006926034	11/30/01	10:00:08	00:00:06	00:00:06	00:00:00	VOICE MAIL	509		159
329	1006926034	11/30/01	10:00:08	00:00:00	00:00:00	00:00:00	DIAL CANCE	509		1********

Figure 2. CDR record sessions for Example 2

Example 3—External party calls office and gets Automated Attendant, then dials out Operator. The result is two sessions logged for this event.



ID	Session ID	Date	Time	Duration	Wait Time	Talk Time	Exit State	Caller ID	Caller Name	Target ID
541	1006926207	11/30/01	10:55:14	00:01:30	00:00:03	00:01:27	CONNECT	100	Front Desk	7966160
542	1006926208	11/30/01	10:56:26	00:04:49	00:00:12	00:04:37	CONNECT	508		14087520800
543	1006926209	11/30/01	10:56:53	00:01:22	00:00:00	00:01:22	VOICE MAIL ACCES	329		329
544	1006926210	11/30/01	10:57:00	00:00:56	00:00:36	00:00:20	VOICE MAIL RECOR	0		261
545	1006926211	11/30/01	10:57:24	00:00:40	00:00:07	00:00:33	CONNECT	100		411
546	1006926212	11/30/01	10:58:11	00:01:37	00:00:08	00:01:29	CONNECT	210		19492798519
547	1006926213	11/30/01	10:58:12	00:01:44	00:00:07	00:01:37	CONNECT	100		7133900
548	1006926214	11/30/01	10:58:14	00:00:39	00:00:39	00:00:00	RING NO ANSWER	8045397431		309
549	1006926215	11/30/01	10:58:33	00:01:36	00:01:36	00:00:00	TRANSFER	5107951624		100
550	1006926215	11/30/01	11:00:09	00:00:57	00:00:00	00:00:57	CONNECT	5107951624		100
551	1006926216	11/30/01	10:59:18	00:01:33	00:00:37	00:00:56	VOICE MAIL RECOR	8045397431		315
552	1006926217	11/30/01	10:59:13	00:00:59	00:00:38	00:00:21	TRANSFER	7049263474		204
553	1006926217	11/30/01	11:00:08	00:00:04	00:00:04	00:00:00	TRANSFER	204		235
554	1006926217	11/30/01	11:00:12	00:00:55	00:00:08	00:00:47	VOICE MAIL RECOR	7049263474		235
555	1006926218	11/30/01	10:59:57	00:01:17	00:00:30	00:00:47	VOICE MAIL RECOR	4409348030		316
556	1006926219	11/30/01	11:00:03	00:08:18	00:00:15	00:08:03	CONNECT	UNKNOWN		106

Figure 3. CDR record sessions for Example 3

Records and Data Schema

This section contains explanations of the CDR search results records, including the data schema.

Important!

In order to reduce the storage space of the database, records with all zero files are not written to the database.

Search Results

This section explains the fields in all the CDR Search results windows.

CDR Search / Group CDR Search Results: Summary Window

This is shown in "Summary (CDR Search and Group CDR Search)"

Field	Definition
ID	Number assigned by CDR Search to this record
Time/Extension/ Workgroup/Trunk/ Date	Start time for this record, if sorting by **Time**; Extension for this record, if sorting by **Extension**; Workgroup for this record, if sorting by **Workgroup**; Trunk for this record, if sorting by **Trunk**; Date for this record, if sorting by **Date**.
Total Records	Total CDR records of the type searched for. **Note:** One call may have multiple CDR records logged. Therefore, the number of records may not match the number of calls in WG Statistics screens.
Total Duration	Sum of duration of the calls in the records, where duration lasts from **Start Time** to **End Time** (see "Record Window for Call Info" for explanations of these fields)

CDR Search / Group CDR Search Results: Detail Window

Field	Definition
ID	Number assigned by CDR Search to this record
Session ID	Unique number assigned by MAXCS to this call
Sequence ID	Unique number to identify multiple records of same call (same session ID), beginning with 0.
Conference ID	Unique number to identify multiple conference calls.
Date	Date of call
Time	Start time of call
Duration	Duration of call **(EndTime** minus **StartTime**; see Table 9, “CDRMAIN" for explanations of these schema)
Wait Time	**RingDuration** plus **QueueDuration** (see Table 9, “CDRMAIN" for explanations of these schema)
Talk Time	**TalkDuration** (see Table 9, “CDRMAIN" for explanations of these schema)
Others Time	**AADuration** plus **HoldDuration** plus **VMDuration**
Message Duration	VMRecDuration
Exit state	The last state of call before the call record is logged. (see Table 9, “CDRMAIN" for details)
Caller ID	Caller phone number of a call
Caller Name	Caller name for a call
Target ID	Target number for a call
Target Name	Target name for a call
DNIS	DNIS information for an incoming call
Acct Code	Account code
URL	URL when “call” is initiated by AltiWeb user clicking the make-call button
User Data	Agent input

Record Window for Call Info

This is shown in the “Call Details” section.

Field	Definition
Node ID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin
Session ID	Session ID: a unique number, usually 9 digits or larger, assigned by MAXCS to a call
Internal Call	Internal or external call
Direction	Direction of the call (incoming or outgoing)
Start Time	*Outgoing* call: Date / time when caller receives ringback, busy, or connect signal *Incoming* call: Date / time when system responds to the call.
End Time	Date and time when call exits this stage or disconnects
Duration	Duration of call **(End Time** minus **Start Time)**
Caller Type	Caller line type (see Table 9, “CDRMAIN" for details)
Caller PAD	Line’s physical address for a call
Caller ID	Caller number for a call
Caller Name	Caller name for a call
Target Type	Call target line type (see Table 9, “CDRMAIN" for details)
Target PAD	Physical address of line for a call target
Target ID	Number for a call target
Target Name	Name for a call target
Workgroup Number	Target workgroup number for an incoming call
Outgoing Workgroup	Workgroup number for an outgoing call, as set in MaxAdmin or by agent at logon
DNIS	DNIS number for incoming call
Project	Project number for trunk, as set in MaxAdmin
Account Code	Account code
Attendant Duration	Duration while call is in Auto Attendant/IVR state
Ring Duration	Duration while call is in ringing state.
Queue Duration	Duration while incoming call is in queue (workgroup or direct call)
VM Duration	Duration after a call goes into voicemail box; includes greeting, false attempts at messages, and review of message, and includes **VM Record Duration**

Field	Definition
VM Record Duration	Duration of recording time for a VM message that was completed; in MaxCommunicator, this corresponds to **Length** field of a voicemail.
Hold Duration	Duration while call was on hold or parked
Talk Duration	Duration while the call is answered by a person; see Table 9, “CDRMAIN" for details)
Record Duration	Duration of conversation recording
Exit State	The last state of call before the call record is logged; (see Table 9, “CDRMAIN" for details)
URL	URL when “call” is initiated by AltiWeb user clicking the make-call button
User Data	Agent input

WG Statistics Search Results: Agent Statistics Window

This is shown in the “Statistics (WG Statistics)” section.

Field	Definition
Upper half of window	
ID	Number assigned by MAXCS to this record
Date	Date of time interval
Time	Time interval for these call statistics
In Call Ans	Count of incoming workgroup calls that were answered by an agent; if a login agent uses Pick Call from Queue feature in MaxAgent, this counter is also incremented. If the incoming workgroup call is answered by an agent, then transferred or parked, the transferred or parked call is considered out of this workgroup.
In Talk Time	Sum of talk duration of incoming answered workgroup calls. Talk duration lasts from the time an agent answers the call until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Out Call Ans	Count of connected outbound workgroup calls. (Agent needs to login to outbound workgroup)

Field	Definition
Out Talk Time	Sum of talk duration of connected outbound workgroup calls. Talk duration lasts from the time the call is connected until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Lower half of window (Totals, Averages, and Percentages)	
Total Inbound Calls Answered	Total of **In Calls Ans**
Total Talk Time	Total duration of **In Talk Time**
Average Talk Time	**Total Talk Time** divided by **Total Inbound Calls Answered**
Total Connected Outbound Calls	Total of **Out Call Ans**
Total Talk Time	Total duration of **Out Talk Time**
Average Talk Time	**Total Talk Time** divided by **Total Connected Outbound Calls**
Total Number of Wrap-Up	Total number of Wrap-ups for both incoming and outgoing workgroup calls
Total Wrap-up Time	Total of Wrap-up duration (time while agent is in wrap-up state) for both incoming and outgoing calls
Average Wrap-up Time	**Total Wrap-up Time** divided by **Total Number of Wrap-up**

Agent Statistics per Workgroup Window

Shown in “Statistics (WG Statistics)”

Field	Definition
Upper half of window	
ID	Number assigned by CDR Search to this record
Date	Date of time interval
Time	Time interval for these call statistics
In Call Ans	Count of incoming workgroup calls that were answered by an agent; if a login agent uses Pick Call from Queue feature in MaxAgent, this counter is also incremented. If the incoming workgroup call is answered by an agent, then transferred or parked, the transferred or parked call is considered out of this workgroup.

Agent Statistics per Workgroup Window Shown in "Statistics (WG Statistics)"	
Field	**Definition**
In Talk Time	Sum of talk duration of incoming answered workgroup calls. Talk duration lasts from the time an agent answers the call until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Out Call Ans	Count of connected outbound workgroup calls. (Agent needs to log in to outbound workgroup)
Out Talk Time	Sum of talk duration of connected outbound workgroup calls. Talk duration lasts from the time the call is connected until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Login Time	Date and time agent last logged into this WG within or before specified time interval
Logout Time	Date and time agent last logged out of this WG within or before specified time interval
Logout Reason	Logout Reason code
Lower half of window (Totals, Averages and Percentages)	
Total Logged In Time	Total of agent login duration to this workgroup
Total Inbound Calls Answered	Total of **In Calls Ans**
Total Talk Time	Total of **In Talk Time**
Average Talk Time	**Total Talk Time** divided by **Total Inbound Calls Answered**
Total Connected Outbound Calls	Total of **Out Calls Ans**
Total Talk Time	Total of **Out Talk Time**
Average Talk Time	**Total Talk Time** divided by **Total Connected Outbound Calls**
Total Number of Wrap-ups	Total number of Wrap-ups for both incoming and outgoing workgroup calls.
Total Wrap-up Time	Total of wrap-up duration (time while agent is in wrap-up state) for both incoming and outgoing calls.
Average Wrap-up Time	**Total Wrap-up Time** divided by **Total Number of Wrap-up**.

Workgroup Statistics Window

Field	Definition
Upper half of window	
ID	Number assigned by CDR Search to this record
Date	Date of the time interval
Time	Time interval for these call statistics
Incoming Calls	Incoming workgroup calls
Calls in Queue	Count of calls in workgroup queue while all agents are not available; when agent RNA and “No Answer Call Handling” is set to Forward to Next Group Member, this call is re-queued but will not be counted twice.
Calls Answered	Count of workgroup calls that were answered by agents; if a login agent uses Pick Call from Queue feature in MaxAgent, this counter is also incremented. If the incoming workgroup call is answered by an agent, then transferred or parked, the transferred or parked call is considered out of this workgroup.
Calls Answered Duration	Sum of talk duration of incoming answered workgroup calls. Talk duration lasts from the time an agent answers the call until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Outgoing Calls	Count of outgoing connected workgroup calls. (Agent needs to log into this workgroup)
Outgoing Calls Duration	Sum of talk duration of connected outbound workgroup calls. Talk duration lasts from the time the call is connected until the time the call is disconnected, parked or transferred. (Hold time is not included in talk time.)
Calls Abandoned to VM with Msg	Count of calls abandoned to VM (by caller pressing a digit or by system automatically redirecting caller to VM where caller leaves a message
Calls Abandoned in Queue	Count of caller hang up while in queue listening to music or queue greeting
Calls Abandoned during Ring	Count of caller hang up while ringing a workgroup agent
Calls Abandoned to VM without Msg	Count of calls abandoned to VM (by caller pressing a digit or by system automatically redirecting caller to VM where the caller did not leave a message
Overflowed/Redirected	Count of calls that overflowed from the workgroup queue or redirected to other destinations;

Field	Definition
Wait Time for Answered Calls	Sum of wait time (queue duration + ring duration) for **Calls Answered**
Wait Time for Abandoned Calls	Sum of wait time (queue duration + ring duration) of all abandoned calls
Lower half of window (Totals, Averages, and Percentages)	
Group Inbound Calls Summary	
Group Total Inbound Calls	Total of all inbound calls, including **Answered, Overflowed,** and all **Abandoned** calls
Total Calls Without Queueing	Total of calls with queue duration of zero.
Total Calls in Queue	Total of **Calls in Queue**
Total Calls Answered	Total of **Calls Answered**
Total Calls Overflowed	Total of **Overflowed/Redirected**
Total Calls Abandoned	Total of **Calls Abandoned** which is the sum of **Abandoned in Queue**, **Abandoned During Ring**, **Abandoned to Voice Mail**, and **Abandoned to Others** in the following sub-categories.
Abandoned in Queue	Total of **Calls Abandoned in Queue**
Abandoned during Ring	Total of **Calls Abandoned during Ring**
Abandoned to Voice Mail	Total of calls abandoned to voice mail, which is the sum of **Leave VM** and **Without VM** in the following sub-category.
Leave VM	Total of **Calls Transferred to VM**
Without VM	Total of **Calls Abandoned during VM**
Abandoned to App or Others	Total of calls redirected to a target other than VM, when caller in queue presses a digit. Abandoned to application is also included.
Historical Service Level	
Total Calls Answered Within SL	Total of **Calls Answered** with Queue Duration less than or equal to the Service Level Threshold configured in Workgroup Configuration window of MAXCS/MaxAdmin

Field	Definition
Total Inbound Talk Time	Total of **Calls Answered Duration**
Average Inbound Talk Time	**Total Inbound Talk Time** divided by **Total Calls Answered**
Average Wait Time for Answered Calls	**Total Wait Time for Answered Calls** divided by **Total Calls Answered**
Average Wait Time for Overflowed Calls	**Total Wait Time** (Queue Duration + Ring Duration) **for Overflowed Calls** divided by **Total Calls Overflowed**
Average Wait Time for Abandoned Calls	**Total Wait Time** (Queue Duration + Ring Duration) **for Abandoned Calls** divided by **Total Calls Abandoned**
Total Wait Time for Answered Calls	Total of **Wait Time** (Queue Duration + Ring Duration) **for Answered Calls**
Total Wait Time for Overflowed Calls	Total Wait Time (Queue Duration + Ring Duration) for overflowed calls
Total Wait Time for Abandoned Calls	Total of **Wait Time** (Queue Duration + Ring Duration) for **Abandoned Calls**
Total Outbound Connected Calls	Total of **Outgoing Calls**
Total Outbound Talk Time	Total of **Outgoing Calls Duration**
Average Outbound Talk Time	**Total Outbound Talk Time** divided by **Total Outbound Connected Calls**

Data Schema

This section describes the data schema used in CDR and RTM records.

Table 1: AGENTACTIVITY

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100

Database Element	Definition	Type	Specification
Time_Stamp	GMT time when activity occurs. Seconds since 1970/01/01 00:00:00.	LONG	
GMTOffset	Offset to GMT time, includes daytime savings, in seconds; ex: Pacific Summer time 25200	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd
DayOfWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday
AgentNum	Agent Extension Number	LONG	
WGNum	Workgroup Number	LONG	
Activity	Activity of the Agent	LONG	1 = Staff 2 = UnStaff 3 = Login 4 = Logout 5 = Ready 6 = DNDFWD 7 = Not Ready 8 = Wrapup 9 = Error

Database Element	Definition	Type	Specification
Reason	Reason for Activity. (For logout, it is logout reason code)	LONG	96 = Network issues caused the system to log out an IP phone agent from the workgroup. 97 = Agent's physical or IP extension is changed to virtual extension. System logs out the extension from workgroup. 98 = Supervisor logs out the agent. 99 = Agent ring no answer. System logs out the agent from workgroup based on configuration
WrapUpSessionID	Call session, for wrap up	LONG	
WrapUpDirection	Call direction, for wrap up	LONG	When **Activity** = 8 (Wrapup), 1 = inbound wrap-up 2 = outbound wrap-up
WrapUpDuration	Wrap up duration	LONG	
ReasonDescription	Description of the Logout reason	CHAR(64)	

Table 2: AGENTPERWGSUMMARY1

Agent per Workgroup Statistics during the time interval specified by Start Time and End Time.

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to an MAXCS system in MaxAdmin	LONG	value: 1–100
StartTime	GMT start time of record's period. Seconds since 1970/01/01 00:00:00.	LONG	
EndTime	GMT end time of record's period. Seconds since GMT 1970/01/01 00:00:00.	LONG	

Database Element	Definition	Type	Specification
GMTOffset	Offset to GMT time, includes daytime savings, in seconds; ex: Pacific Summer time 25200	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd
DayOfWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday
AgentNum	Agent Extension Number	LONG	
WGNum	Workgroup Number	LONG	
uid	Unique ID to link to AGENTPERWGSUMMARY2 and AGENTPERWGSUMMARY3	LONG	

Table 3: AGENTPERWGSUMMARY2

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID to link to AGENTPERWGSUMMARY1	LONG	
NumInWGCall	Total inbound WG calls during interval	LONG	
NumInWGAnswered	Number of incoming workgroup calls answered by this agent	LONG	
NumInWGRNA	Total of agent RNA	LONG	
DurInWGAnsRing	Ring duration of answered calls workgroup calls	LONG	

Database Element	Definition	Type	Specification
DurInWGTalk	Talk duration of incoming calls (NumInWGAnswered), starting from the time the agent answers a call until the call is disconnected, transferred, or parked	LONG	
NumInWGWrapUp	Number of Wrap-ups for incoming calls	LONG	
DurInWGWrapUp	Wrap-up duration for incoming calls	LONG	
NumInWGVM	Count of WG calls to agent's VM with message	LONG	
DurInWGVM	Total duration of voicemail message	LONG	
NumInWGHold	Number of incoming calls hold by agent (One call hold multiple times count once only)	LONG	
DurInWGHold	Hold duration of incoming calls	LONG	
NumOutWGConnected	Count of outgoing connected calls including trunk and extension calls	LONG	
DurOutWGTalk	Talk duration of outgoing connected calls (NumOutWGConnected) from the time the call enters "Connected" state until disconnected, parked or transferred	LONG	
NumOutWGWrapUp	Number of wrap-ups for outbound WG calls	LONG	
DurOutWGWrapUp	Wrap-up duration for outbound WG calls	LONG	
NumOutWGHold	Count of outbound WG hold calls by agent (One call on hold multiple times will count once only)	LONG	
DurOutWGHold	Hold duration of outbound workgroup calls	LONG	

Table 4: AGENTPERWGSUMMARY3

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID to link to AGENTPERWGSUMMARY1	LONG	
DurLogin	The total time agent was logged in.	LONG	

Table 5: AGENTSUMMARY1

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID to link to AGENTSUMMARY2, AGENTSUMMARY3, and AGENTSUMMARY4	LONG	
StartTime	GMT start time of record's period. Seconds since 1970/01/01 00:00:00.	LONG	
EndTime	GMT end time of record's period. Seconds since GMT 1970/01/01 00:00:00.	LONG	
GMTOffset	Offset to GMT time, includes daytime savings, in seconds; ex: Pacific Summer time 25200	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd

Database Element	Definition	Type	Specification
DayofWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday
AgentNum	Agent Extension Number	LONG	

Table 6: AGENTSUMMARY2

Database Element	Definition	Type	Specification
The following values are significant only when an agent logs into at least one workgroup. If an agent doesn't log into any workgroup, all values should be zero.			
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID to link to AGENTSUMMARY1	LONG	
NumInDirCall	Direct (non-workgroup) incoming call	LONG	
NumInDirAnswered	Direct (non-workgroup) incoming call answered	LONG	
DurInDirTalk	Total talk duration of direct (non-workgroup) incoming calls	LONG	
NumInDirVM	Count of direct inbound voicemail message	LONG	
DurInDirVM	Total duration of direct inbound voicemail message	LONG	
NumInDirHold	The number of direct incoming call put on hold (One call on hold multiple times will count once only)	LONG	
DurInDirHold	Total hold duration of direct incoming calls	LONG	

Database Element	Definition	Type	Specification
NumOutDirConnected	Number of direct outgoing connected calls	LONG	
DurOutDirTalk	Total talk duration of direct (non-workgroup) outgoing connected calls	LONG	
NumOutDirHold	Count of direct outbound calls on hold (One call on hold multiple times will count once only)	LONG	
DurOutDirHold	Total hold duration of direct outbound calls	LONG	
NumAgentBusy	Number of times agent is busy	LONG	
DurAgentBusy	The duration of time when agent is busy	LONG	
NumInWrapUp	Number of times agent entered Wrap Up	LONG	
DurInWrapUp	Wrap-up duration of incoming workgroup calls	LONG	
NumOutWrapUp	Number of wrap-ups for outbound workgroup calls	LONG	
DurOut WrapUp	Wrap-up duration for outbound workgroup calls		

Table 7: AGENTSUMMARY3

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID to link AGENTSUMMARY1	LONG	
CountLogonWG	Count of workgroups that agent is logged into	LONG	
DurAgentLogon	The login duration when agent logs into at least one workgroup	LONG	

Database Element	Definition	Type	Specification
NumAgentAvailable	Number of times agent is available	LONG	
DurAgentAvailable	The duration while agent is in available state	LONG	

Table 8: AGENTSUMMARY4

Database Element	Definition	Type	Specification
The following values are significant only when an agent logs into at least one workgroup. If an agent doesn't log into any workgroup, all values should be zero.			
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
uid	Unique ID link to AGENTSUMMARY1	LONG	
NumAgentDND	Number of times agent entered DND	LONG	
DurAgentDND	Total duration of the DND	LONG	
NumAgentFWD	Number of times agent enable extension forward and enter FWD state	LONG	
DurAgentFWD	Duration of agent in FWD state	LONG	
NumAgentError	Number of times agent enter Error State while login	LONG	
DurAgentError	Duration of agent in Error State while login	LONG	
NumNotReady	Count of Agent enters Not-Ready state	LONG	
DurNotReady	Duration of Agent Not-Ready	LONG	

Table 9: CDRMAIN

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100

Database Element	Definition	Type	Specification
StartTime	GMT start time of record's period. Seconds since 1970/01/01 00:00:00.	LONG	
EndTime	GMT end time of record's period. Seconds since 1970/01/01 00:00:00.	LONG	
GMTOffset	Offset to GMT time, includes daytime savings, in seconds; ex: Pacific Summer time 25200	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd
DayOfWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday
SessionID	Session ID: a unique number, usually 9 digits or larger, assigned by MAXCS to a call	LONG	
SequenceID	A unique number to identify multiple records of same call (same Session ID), beginning with 0	LONG	
TrunkCall	Trunk call or external call	LONG	1=Internal 2=Trunk Call
Direction	Direction of the call (incoming or outgoing)	LONG	1=Incoming 2=Outgoing
OriginalPriority	The first priority set by the system for this call (1-9)	LONG	

Database Element	Definition	Type	Specification
StartPriority	Call priority at Start Time (1-9)	LONG	
EndPriority	Call priority at End Time (1-9)	LONG	
CallerType	Type of line for an incoming call	LONG	0 = Unknown line type 1 = Ext analog 2 = Ext IP 3 = Reserved 4 = Ext virtual 5 = Workgroup 6 = Application Extension 7 = Analog Trunk 8 = T1 Trunk 9 = IP Trunk 10 = PRI Trunk 11 = not used 12 = E1 trunk
CallerPad	Line's physical address for an incoming call	CHAR (5)	E.g. "0004", where "00"=slot, "04"=channel Always "-1-1" for WG or virtual extension
CallerNum	Caller phone number of an incoming call (extension number or off-net PSTN)	CHAR (41)	
CallerName	Caller name for an incoming call (provided by CO for trunk calls; as entered in MaxAdmin for extension calls)	CHAR (65)	
CallerTenant	Caller Tenant name	CHAR	
CallerProject	Caller Project ID	LONG	

Database Element	Definition	Type	Specification
TargetType	Called target line type	LONG	0 = Unknown line type 1 = Ext analog 2 = Ext IP 3 = Reserved 4 = Ext virtual 5 = Workgroup 6 = Application Extension 7 = Analog Trunk 8 = T1 Trunk 9 = IP Trunk 10 = PRI Trunk 11 = not used 12 = E1 trunk
TargetPad	Physical address of line for a called target	UCHAR (5)	E.g. “0004,” where “00”=slot and “04”=channel
TargetNum	Number for a called target	CHAR (41)	
TargetName	Name for a called target	CHAR (65)	
TargetTenant	Tenant name for called target	CHAR	
TargentProject	Project ID for called target	LONG	
TargetWGNum	Target workgroup number	CHAR	
WGSessionID	A unique Session ID for workgroup call	LONG	
OutGoingWG	Workgroup number for an outgoing call, while agent login	LONG	
ConfSessionID	Conference Session ID	LONG	
DNIS	DNIS number for incoming call	CHAR (33)	
AccountCode	Account code	CHAR (11)	1—10 digits in length

Database Element	Definition	Type	Specification
AADuration	Duration in seconds an incoming call is connected to the Auto Attendant/IVR; multiple connections to AA/IVR in a single session produces multiple records	LONG	
RingDuration	Duration in seconds a call is ringing and in workgroup queue	LONG	
QueueDuration	Duration in seconds when a call stays in a queue.	LONG	
VMDuration	Duration in seconds after a call goes into a voicemail box; includes greeting, false attempts at messages, successful message, and review of message	LONG	
VMRecDuration	Duration in seconds of recording time for a VM message that was completed	LONG	
HoldDuration	Duration in seconds while a call is on hold	LONG	
TalkDuration	Duration in seconds of talk time	LONG	
RecordDuration	Duration in seconds of recording	LONG	
AnswerWithin SLT	Call is answered within the Service Level Threshold	LONG	1=within 2=not within
ExitState	State when call is terminated	LONG	(see end of this table for specifications for the 34 exit states)

Database Element	Definition	Type	Specification
AbnTargetType	Type of abandon forward target	LONG	1=Abandon to AA 2=Abandon to Operator 3=Abandon to Extension 4=Abandon to Outside Number 5 =Abandon to VM 6 = Abandon to Application 7 = Abandon to Others 8 = Call Disconnected
AdvQAppType	Type of Advanced Queue Management Application	LONG	
MMCallType	Multi-Media call type	LONG	
PriorityQueueDuration	The duration in seconds of a call hold current priority in queue	LONG	
IVRExitPoint	Exit Point of IVR/AA	CHAR (63)	When a call is transferred from AA menu, the system logs the exit AA point, which is the AA item ID.
IVRData	Data of IVR/AA	CHAR (255)	
UserData	Agent input	CHAR (255)	
FormData	Web form data	CHAR	
URLData	Last URL	CHAR (255)	
DNISName	DNIS name for incoming call	CHAR (64)	

ExitState specifications (see database element ExitState):

1 – Auto Attendant: call exits in the AA / IVR.

2 — Forward: call is forwarded from an extension by configuration forwarding.

3 – Call Redirect: call is redirected to another extension or trunk by the AltiLinkPlus command "Redirect".

4 – Ring No Answer: call rang target but no agent answered.

5 – Busy: call tried to ring an agent but the agent extension was busy.

6 – Queue: call abandoned from the workgroup queue.

7 – Queue Overflow: call was forwarded by workgroup overflow configuration.

8 – Connected: call connected with an agent, then disconnected.

9 – Conference: caller is conferenced with others, then disconnected.

10 – Conference Member: every member of a conference call will have a record with this exit state.

11 – Hold: A calls B and is connected. B uses MaxCommunicator/ MaxAgent to hold this call. B drops, and now A is in "Hold" state. Then A drops. Call A gets this exit state.

12 – Transfer: call is transferred by an agent who pressed flash to transfer this call. A calls B and is connected. B presses flash, dials C, and is connected to C. B drops. Call A with B gets this exit state.

13 – Transfer destination unavailable: A calls B. A presses flash and dials C. C rings but no answer. A drops. Call A with C gets this exit state.

14 – Transfer Cancel: A calls B. B presses flash, calls C and is connected. Then B presses flash to disconnect C and connect back with A. Call B with C exits with "transfer cancel".

15 – Go to VM w/out leaving vm: A calls B. B is busy or ring no answer. A goes into B's voice mail. A drops without leaving any voice mail.

16 – Go to VM with leaving vm: A goes into B's voice mail, leaves a voice mail, and then drops.

17 – General VM: A presses ## to enter the voice mail system, inputs password, then drops.

18 – VM Access: A presses ### to enter another extension’s voice mail, then drops.

19 – VM Notify: A receives a notification call, enters password, then drops.

20 – Call Pick Up: A calls B. While B is ringing, C enters **#29B** to pick up this call. Call A with B gets this exit state.

21 – All Trunks Busy: A dials an outside number, and no trunk is seized. A drops and gets this exit state.

22 – No session: A tries to log on to MaxCommunicator/MaxAgent/ AltiConsole/third party application, but there are no more licenses available.

23 – Personal Park: call is parked by **#31**.

24 – System Park: call is parked by **#41**.

25 – Line Park: call is parked by **#51**.

26 – Call Monitor: A runs MaxSupervisor and initiates a silent monitor or barge in.

27 – Overhead Paging: Call presses **#44** / **#45** / **#46** to page.

28 – Reminder Call: Call was preset as a reminder call.

29 – Group Member RNA: A calls a workgroup and rings an agent. The agent does not answer the ring.

30 – One Number Access: A calls B and goes into B's one number access menu.

31 – APC Connect: [never used]

32 – Ring: call is dropped while it's ringing.

33 – Transfer Ring: A calls B. B presses Flash and dials C. While C is ringing, B drops and A drops. Call A with C gets this exit state.

34 – Transfer Connected: A calls B and is connected. A presses flash, dials C, and is connected too. A drops. Call A with C got this exit state.

Table 10: WGRTSUMMARY

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
StartTime	GMT start time of record's period. Seconds since 1970/01/ 01 00:00:00.	LONG	
EndTime	GMT end time of record's period. Seconds since 1970/01/ 01 00:00:00.	LONG	

Database Element	Definition	Type	Specification
GMTOffset	Offset to GMT time, includes daylight savings, in seconds; ex: Pacific Summer time 22500	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd
DayOfWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday
WGNum	Workgroup Number	LONG	
CurNumAgentCfg	Total Agent configured to the WG	LONG	
CurNumAgentUnStaff	Total Agents Un-Staffed (Snapshot at **EndTime**)	LONG	
CurNumAgentLogout	Total Agents Logged Out (Snapshot at **EndTime**)	LONG	
CurNumAgentError	Total Agents Error (Snapshot at **EndTime**)	LONG	
CurNumAgentBusy	Total Agents Busy (Snapshot at **EndTime**)	LONG	
CurNumAgentNotReady	Total Agents Not Ready (Snapshot at **EndTime**)	LONG	
CurNumAgentWrapUp	Total Agents Wrap-up (Snapshot at **EndTime**)	LONG	
CurNumAgentDNDFWD	Total Agents DND/FWD (Snapshot at **EndTime**)	LONG	
CurNumAgentAvailable	Total Agents Available (Snapshot at **EndTime**)	LONG	
CurLongestQTime	Longest Queue Time (Snapshot at **EndTime**)	LONG	

Database Element	Definition	Type	Specification
CurQLength	Number of calls in Queue (Snapshot at **EndTime**)	LONG	
CurNumCallOverSLT	Number of calls exceed SLT (Snapshot at **EndTime**)	LONG	
CurServiceLevel	Real-time Service Level % for WG Queue (Snapshot at **EndTime**)	LONG	
IntvMaxNumAgentUnStaff	Maximum Agents Un-Staffed in record's period	LONG	
IntvMaxNumAgentLogout	Maximum Agents Logged Out in record's period	LONG	
IntvMaxNumAgentError	Maximum Agents Error in record's period	LONG	
IntvMaxNumAgentBusy	Maximum Agents Busy in record's period	LONG	
IntvMaxNumAgentNotReady	Maximum Agents Not Ready in record's period	LONG	
IntvMaxNumAgentWrapUp	Maximum Agents Wrap-up in record's period	LONG	
IntvMaxNumAgentDNDFWD	Maximum Agents DND/FWD in record's period	LONG	
IntvMaxNumAgentAvailable	Maximum Agents Available in record's period	LONG	
IntvMaxLongestQTime	Maximum longest queue time in record's period	LONG	
IntvMaxQLength	Maximum queue length in record's period	LONG	
IntvMaxNumCallOverSLT	Maximum calls exceed SLT in record's period	LONG	
IntvMaxServiceLevel	Maximum Service Level % for WG Queue in record's period	LONG	
IntvMinServiceLevel	Minimum Service Level % for WG Queue in record's period	LONG	

Table 11: WGSUMMARY

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
StartTime	GMT start time of record's period. Seconds since 1970/01/01 00:00:00	LONG	
EndTime	GMT end time of record's period. Seconds since 1970/01/01 00:00:00	LONG	
GMTOffset	Offset to GMT time, includes daylight savings, in seconds; ex: Pacific Summer time 22500	LONG	
LocalDay	8 digit number representing date ex: 20040608 = 06/08/2004	LONG	Format: yyyymmdd
DayOfWeek	Day of the week	LONG	0 = Sunday 1 = Monday 2 = Tuesday 3 = Weds 4 = Thursday 5 = Friday 6 = Saturday
WGNum	Workgroup Number	LONG	
NumInWGCall	Total inbound WG call during interval	LONG	
NumInCallInQ	Total calls in queue during interval	LONG	
DurInCallQ	Total queue duration during time interval for all WG inbound calls	LONG	

Database Element	Definition	Type	Specification
NumInAnswered	Total WG inbound calls answered by agents during interval. If a login agent uses pick call from queue feature in MaxAgent, this counter is incremented. If the call is transferred or parked, this call is considered out of workgroup.	LONG	
DurInTalk	Talk duration of incoming calls (NumInAnswered), starting from the time an agent answered a call until the call is disconnected, transferred or parked	LONG	
DurInAnsQ	Total Queue time for answered inbound WG calls	LONG	
DurInAnsRing	Total ring time for answered inbound WG calls	LONG	
NumInXfer	Count of transferred incoming workgroup calls	LONG	
NumInWrapUp	Number of Wrap-ups for workgroup incoming calls	LONG	
DurInWrapUp	Wrap-up duration for incoming calls	LONG	
NumInAbnInQ	Total number of calls hang-up in queue	LONG	
DurInAbnInQ	Total queue time of calls hang-up in queue	LONG	
DurInAbnInQ_RingTime	Total ring time of calls hang-up in queue	LONG	
NumInAbnDuringRing	Number of calls hang-up during ring (in queue or never in queue)	LONG	
DurInAbnDuringRing	Total Queue time for calls hang-up during ring	LONG	
DurInAbnDuringRing_RingTime	Total Ring time for calls hang-up during ring (in queue or never in queue)	LONG	

Database Element	Definition	Type	Specification
NumInAbnVmMsg	Number of calls abandoned to VM leaving voice message (transferred to VM from queue by caller pressing a digit or the system redirects the call to VM)	LONG	
DurInAbnVmMsg	Total Queue time for calls abandoned to VM leaving voice message	LONG	
DurInAbnVmMsg_RingTime	Total Ring time for calls abandoned to VM leaving voice message	LONG	
NumInAbnVmNoMsg	Number of calls abandoned to VM without leaving VM (redirected to VM from queue by caller pressing a digit or the system redirecting the call to VM)	LONG	
DurInAbnVmNoMsg	Total Queue time for calls abandoned to VM without leaving message	LONG	
DurInAbnVmNoMsg_RingTime	Total Ring time for calls abandoned to VM without leaving message	LONG	
NumInAbnToApp	Number of calls abandoned to add-on applications	LONG	
DurInAbnToApp	Total Queue time for calls abandoned to add-on applications	LONG	
DurInAbnToApp_RingTime	Total Ring time for calls abandoned to add-on applications (in queue or never in queue)	LONG	
NumInAbnToOthers	Number of all calls abandoned to a target other than VM when caller in queue presses a digit	LONG	
DurInAbnToOthers	Total Queue time for **NumInAbnToOthers** calls	LONG	
DurInAbnToOthers_RingTime	Total Ring time for **NumInAbnToOthers** calls	LONG	

Database Element	Definition	Type	Specification
DurInAbnQRing	DurInAbnInQ_RingTime+DurInAbnDuringRing_RingTime+DurInAbnVmMsg_RingTime+DurInAbnVmNoMsg_RingTime+DurInAbnToApp_RingTime+DurInAbnToOthers_RingTime	LONG	
DurInAbnQ	DurInAbnInQ+DurInAbnDuringRing+DurInAbnVmMsg+DurInAbnVmNoMsg+DurInAbnToApp+DurInAbnToOthers	LONG	
NumInOverflow	WG calls overflowed or redirected to other target	LONG	
DurInOverflowQ	Total Queue time for overflowed or redirected calls	LONG	
DurInOverflowRing	Total ring time for all overflowed or redirected calls	LONG	
NumInAnsWithinSLT	Total calls answered with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInHold	Number of inbound WG calls were ever hold by agent (One call on hold multiple times will count just one time)	LONG	
DurInHold	Duration of inbound WG calls were hold by agent	LONG	
NumInRecord	Number of inbound WG calls were recorded	LONG	
DurInRecord	Duration of inbound WG calls were recorded	LONG	
NumOutConnected	Number of WG outbound connected calls	LONG	
DurOutTalk	Duration of outgoing WG calls (NumOutConnected); from the call enters "Connected" state until disconnect	LONG	

Database Element	Definition	Type	Specification
NumOutHold	Number of outbound WG calls that were put on hold by agent (One call on hold multiple times will count just one time)	LONG	
DurOutHold	Duration of outbound WG calls put on hold by agent	LONG	
NumOutRecord	Number of outbound WG calls that were recorded	LONG	
DurOutRecord	Duration of outbound WG calls that were recorded	LONG	
NumOutXfer	Count of outbound WG calls that were transferred by agent	LONG	
NumOutWrapUp	Count of agent outbound WG calls that entered wrap-up state	LONG	
DurOutWrapUp	Total outbound WG Wrap-up duration	LONG	
NumInAbnInQWithinSLT	Total number of calls hang-up in queue with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInAbnDuringRingWithinSLT	Number of calls hang-up in ring (in queue or never in queue) with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInAbnVmMsgWithinSLT	Number of calls leaving VM and with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	

Database Element	Definition	Type	Specification
NumInAbnVmNoMsg WithinSLT	Number of calls abandoned without leaving VM and with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInAbnToAppWithinSLT	Number of calls abandoned to add-on applications with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInAbnToOthersWithinSLT	Number of all other abandoned calls (for example, Ext/WG/External/ AA/IVR) with wait time less than or equal to Service Level Threshold within report interval (QueueTime+RingTime <= SLT)	LONG	
NumInOverflowWithin SLT	WG calls overflowed to other target with wait time less than or equal to Service Level Threshold within report longerval (QueueTime+RingTime <= SLT)	LONG	

Table 12: EXTINFORMATION

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
ExtNum	Extension number	LONG	
Type	Type of the extension	LONG	
FirstName	First name of the extension	CHAR (64)	
LastName	Last name of the extension	CHAR (64)	

Database Element	Definition	Type	Specification
StartTime	GMT timestamp when extension is created; seconds since 01/01/ 1970 00:00:00. 0 means the extension has been created for the first time. Non-zero means actual start time.	LONG	
EndTime	GMT timestamp when the extension is removed	LONG	
StartTimeGMTOffset	Offset to GMT time when the extension is created, includes daylight savings, in seconds; ex: Pacific Summer time 25200	LONG	Format: yyyymmdd
EndTimeGMTOffset	Offset to GMT time when the extension is removed, includes daylight savings, in seconds; ex: Pacific Summer time 25200	LONG	Format: yyyymmdd
RevisionID	Revision ID, beginning from 0; the bigger the number, the older the record	LONG	

Table 13: WGMEMBER

Database Element	Definition	Type	Specification
Version	Version of the record	LONG	2 = OE/ACM 5.0A
NodeID	Server ID (System ID) assigned to a MAXCS system in MaxAdmin	LONG	value: 1–100
WGNum	Workgroup Number	LONG	
ExtNum	Agent Number	LONG	
StartTime	GMT timestamp when extension is created; seconds since 01/01/ 1970 00:00:00. 0 means the extension has been created for the first time. Non-zero means actual start time.	LONG	
EndTime	GMT timestamp when the extension is removed	LONG	
StartTimeGMTOffset	Offset to GMT time when the extension is created, includes daylight savings, in seconds; ex: Pacific Summer time 25200	LONG	Format: yyyymmdd

Database Element	Definition	Type	Specification
EndTimeGMTOffset	Offset to GMT time when the extension is removed, includes daylight savings, in seconds; ex: Pacific Summer time 25200	LONG	Format: yyyymmdd
RevisionID	Revision ID, beginning from 0; the bigger the number, the older the record	LONG	

Glossary

A

Abandonment - Incoming call where the caller decides to disconnect ***before completing*** a call processing state in the phone system: listening and handling auto attendant, while waiting in queue, or while in voice mail. (*See also* short calls.)

Account Code - A number entered by a caller to represent how the call should be tracked or billed.

Agent - A service representative who consistently handles customer inquiries of all types.

Agents Signed On - Number of agents, signed on to the phone system to be agents, using their phone to sign-on.

All Trunks Busy - An All Trunks Busy record should have dialing extension in party1, dialing number in *Trunk Remote Number*. If the call is made by out call routing, out call route and overflow routes should be set.

All Trunks Busy means that there were no free outgoing trunks available for a given route.

Analog - Telephone lines going to the central office (trunks) and/or telephone lines going to the phone system desktop phonesets using standard analog communication; voltage variations represent voice signals.

ANI (Automatic Number Identification) - The phone number of the person or site making a phone call to the system. ANI is provided on T1/PRI circuits only, and represents the billing number of the caller, not necessarily the phone number. For example, ANI for people calling from a company.

ASA (Average Speed of Answer) - The amount of time, on average, that a company wants to answer incoming calls. Also, the actual average amount of time it takes before a caller is answered by an agent.

Auto Attendant Duration - The amount of time a caller is listening and responding to call processing steps in the phone system auto attendant process.

Average Call Duration - The average amount of time calls are taking from phone system answer to phone system disconnect.

C

CallerID - The phone number of the calling party. CallerID differs from ANI in that CallerID is the phone number of the phone from which the caller is calling as opposed to the billing number for the phone. If a caller is calling from a business, the CallerID will be different from the ANI number, in most cases.

Calls in Queue - The number of calls waiting in a queue for an agent or answering device.

Carrier - Voice telephone network provider such as AT&T, MCI, and Sprint.

Carrier # - The 10XXX dialed number which is used by a caller or the system to inform the local switching system which Carrier has been selected to handle the phone call. For example, AT&T is 10288.

CLID (Caller Line Identification) - European term for CallerID.

D

Disconnect - When a call disconnects from the phone system; if an extension disconnects first, then…; if a incoming caller disconnects first, then…

DNIS (Direct Number Inward Service) - The phone number dialed by the caller. Usually companies purchase a block of DNIS numbers from the local central office so they may give customers direct access to key employees. DNIS numbers can be 800 numbers, which represent specific types of service offered to the public by a company. DNIS numbers, in call centers, therefore, can conceptually be regarded as applications.

Call Duration (Duration) - Average amount of time a call takes from phone system answer to phone system disconnect.

E

Exit State - The state of the call in the phone system when the caller decided to disconnect. The nominally correct exit state is when a caller disconnects during conversation with a person or after leaving a voice message. Exit state numbers help reporting tools describe the total calls that were abandoned early as well as normal calls.

ExitQ - When the call exited a workgroup queue.

ExitVM - When the call exited voicemail.

Extension - The phone number of a phone on the phone system. MAXCS has extension numbers representing phonesets (analog, IP), virtual extensions (logical locations), and workgroups (queues for agents).

H

Handled Calls - The number of calls actually processed successfully to a normal disconnect exit state. For example, answered by a person, or the person completed a voice message or listening to a prompt.

Handled WG - The number of calls handled by a workgroup in the phone system.

I

In WG Average Duration - The amount of time, on average, calls spent waiting for a free agent while in a queue.

Inbound - Calls arriving into the phone system over trunks, either public or private tie trunk lines.

IP (Internet Protocol) - IP is used to represent the concept and practice of encapsulating voice into data packets carried on data networks, both private and public, including the Internet.

IP Extension - An extension within the MAXCS phone system based on encapsulated voice connections (IP voice) as opposed to analog phonesets. AltiGen supports physical and IP phone sets.

IP Trunk - A digital connection to a LAN or Wide Area Network (WAN) that can handle IP encapsulated voice transmissions.

L

Line - Pairs of wires that carry voice over analog circuits to the central office (i.e., trunks). Sometimes also used as station lines (extensions) and trunk lines (trunks).

Log-off with reason code - An agent can log out of a workgroup because they have a lunch break, classes, or other reasons. The manager establishes the meaning of numeric codes, and the system records them when used.

M

MaxWaitTime - The maximum amount of time a call has waited in queue to be handled.

Minutes (outbound) - While many fields may represent duration in minutes or seconds, in this case the use of minutes is the number of billable minutes for phone calls. This is particularly of interest for outbound phone calls, and is useful for billing comparisons.

N

NodeID - The MAXCS system number (from 0–128) that was assigned to a given system in MaxAdmin. The number is used to separate CDR records from different AltiServ systems when the records are collected jointly at one site using one database server for consolidated reporting.

O

Outbound - Calls placed by users of the phone system to the outside world over public or private trunk circuits within the MAXCS system including analog, digital, and IP types.

Outbound Workgroup - Outgoing calls placed by a workgroup agent who is assigned and logged in to an Outgoing Workgroup.

OutCall Routing - Calls dialed on the system can be processed by the system using routing tables. The routing tables and their configuration options are referred to generically as outcall routing. Outcall routing permits companies to restrict the types of outbound calls, change their dialing pattern, determine the type of trunk to be used, and determine the type of carrier to be used.

Overflow Calls - Calls that cannot be handled by a primary service and spill over to an alternative service. In the case of MAXCS, this applies to outgoing calls finding all trunks busy for a given route table.

P

PAD - A **P**hysical **AD**dress generalized to represent the physical slot on the processor chassis where an interface board is located, and the channel assigned on that interface board represents an extension or trunk port.

Party1 - Party1, found in the database schema, represents the first extension originating an outbound call or answering a incoming call from a trunk. In a call center, Party1 is typically the first agent to answer the caller.

Party2 Party2, found in the database schema, represents the second extension answering an incoming call as the result of receiving the call via a call transfer or call pick-up. In a call center, Party2 is typically the second agent (often a supervisor) who answered the call.

Note: Party2 accumulates the call handling time for any additional successive call transfers or call processing. Therefore, the times shown for Party2 can represent more than one additional extension to have handled an incoming call. The “MoreThan2WG” CDR field will indicate if the Party2 field represents multiple extensions handling the call after the first Party1 agent.

PRI - ISDN Primary trunks

Project OutCalls - MAXCS provides some, not all, of the features businesses find useful in shared project environments.

One supported area is tracking who placed an outbound call by business name or dialing plan. This name is called the project name, is configured in MaxAdmin under each extension, and is placed in the CDR record each time that particular extension places an outbound call. The field is multi-purpose, so it can also be used by businesses wanting to track calls by department for bill-back purposes. Mixed use is not supported, for example, project and department.

Q

Queued Call - A call that has entered the queue as a result of not finding any free agents in a workgroup or for an extension and must now wait for an extension to become free. The queue duration associated with a queued call includes the ringing time of the target extension.

R

Reason Code - A number, from 0–255, that was entered by a workgroup agent using the MaxAgent application to indicate the reason they made themselves unavailable to receive calls even though they may be scheduled for work. For example, code 20 could represent a lunch break.

RNA (Ring No Answer) - the condition when a call reaches an extension and the called extension does not answer. This can be true for any type of call to any extension. However, within a call center, failure to reach an agent whose phone is in the “signed-on and idle” state, getting an RNA is a problem. Calls getting an RNA from an agent phone will be sent back to the queue (this is configurable) in most cases. The agent's phone will then be taken out of service.

Route Name - The name of an outbound (outcall) route table entry. This is useful to identify the type of routing treatment that was given to a call.

Route Table - A set of outbound call routing choices, provided by MAXCS within outcall routing, are defined within a route table. The route table identifies the trunks that should be used for calls assigned this route table. It also provides for how the dialed number should be modified, if at all, and whether the number needs to be preceded by a carrier code such as 10XXX.

Route Table Name - Same as Route Name. Route Table Name is the name assigned to the route, and Route Name is the same name shown in reports under the title Route Name.

Routes - Route is the selected trunk to carry a phone call to the outside world. Route Tables determine which routes should be used and how to use them. If one route is too busy (no trunks available), then the Route Table can be configured with an alternative choice. Ultimately, the call takes a single, final route.

S

Score - This may or may not be found in the reports created within Call Analyst depending on applications created by the customer, not Call Analyst or AltiGen. Score is a number that represents how well a supervisor believes an agent has handled a particular call that the supervisor has silently monitored. Using the UserDefined fields provided in MAXCS's ActiveX AltiLink protocol and in its CDR data schema, a customer can associate a score with a call.

Note: This is a custom implementation.

Service Level% - The percentage of calls meeting the expectation for service set by the owner of the call center system.

When reported in the AltiClient screens, Service Level% is a real time snap shot of any given exact moment in the workgroup queue of calls meeting or exceeding performance.

When reported in other custom reporting packages based on historical CDR data, the service level will represent the average over a given time interval defined by the program.

Service level is the number of calls waiting less than a threshold time interval divided by the total number of calls in queue over the same interval. The threshold, which is the maximum amount of time the company would like a caller to have to wait for an agent, is configurable in MaxAdmin.

Note: *See also* data schema descriptions.

Session ID Number - A unique number, usually 9-digits or larger, assigned by MAXCS to a call. This number uniquely identifies a call. If an incoming call is transferred by an agent to an outside trunk, then an additional new CDR record is created; however, this additional record retains the same SessionID. This permits reporting programs to combine CDR records for the same call.

SignOff - The timestamp when a workgroup agent signed off from the workgroup.

SignOn - The timestamp when a workgroup agent signed on to the workgroup.

SignOn Duration - The difference between Sign-on and Sign-off pairs; times in closest proximity. An agent can sign on and off more than once each day, so there may be multiple such pairings in the CDR database.

Spillover - Overflow from one route table to the next.

T

T1 - T1 is a digital facility from the phone system (customer premise) to the central office, or from one CPE site to another between systems (T1 tie trunks). Voice is encoded as zeros and ones on a channel (i.e., conceptual trunk) using industry standard encoding.

Talk Duration - The amount of time, totaled or averaged, that an extension services an incoming or outgoing call. Average talk durations are useful in call centers to measure how well an agent handles callers.

Threshold - The maximum amount of time a company wants an incoming caller to wait before they are serviced by an extension (an agent). This is related to service level, and is expressed as "we want calls be serviced 90% of the time (service level) in less than 20 seconds (threshold)."

Transferred Calls - Calls transferred to an extension, another workgroup, auto attendant, voice messaging, or an outgoing trunk.

Trunk - The conceptual term for a voice connection to the outside world, such as the central office or another site. When analog circuits are involved, the physical wire pair is called a trunk.

When digital circuits are involved, the trunk is a logical, dedicated channel on the digital connection.

When IP trunks are mentioned, it means a data packet with a specific destination IP address, being sent out on a LAN or WAN.

Trunk PAD Number - The board and channel numbers respectively: "0102."

Trunk Remote Number -

- The target phone number of an outgoing call, or
- The CALLID/ANI for an incoming call, or
- The IP address of the target far-end system for either incoming or outgoing IP calls.

Note: The use of "trunk" is a misnomer.

Transfer-Trunk Number - If a call is *transferred* by an extension to a phone number outside the phone system, then the target phone number is placed in this field.

U

URL - If a caller enters the system via the Internet using AltiGen's AltiWeb software (Web Button) then this field will contain the URL address for the caller accessing the system.

User Data -

- If a call is processed via auto-attendant and information is collected and offered to an external application using the DDR function in auto-attendant, then the external application can populate this field with information about the call, collected or otherwise.

- The structure of user data is an array or buffer of name-value pairs. You can have as many pairs as you wish, but the total buffer is only 128 bytes long. A name-value pair is your own field name followed by the field value. Each name-value pair is separated from others by an @ character.
- User data can be loaded into messages sent to the system via AltiGen's ActiveX control, AltiX.
- User Data can be received within messages sent by AltiServ to an external application via the auto-attendant DDR step and received by an application using AltiGen's ActiveX control, AltiX.
- User data is preserved when calls are transferred between extensions, and between extensions across multiple MAXCS systems.
- User data is useful for screen pops and automated processing application.

The customer needs to employ a system integrator in order to implement the use of User Data.

V

VM Box Extension - The voice message mailbox is an extension number where calls are sent to leave messages. VM box extensions are used for workgroups in call centers as well as the standard uses for individuals.

VM Start Time - The time a call enters the voice mail system to potentially record a message.

W

WorkGroup - The workgroup is an extension representing a collection of individual extensions, such that each of these individual extensions can service a call arriving at the workgroup extension number. If none of these extensions is available at the time a call arrives, then the call is queued for this particular workgroup—a workgroup queue.

In the call center sense, the workgroup can be configured for longest available agent queuing.

Wrapup Duration - The amount of time an agent takes to handle transaction information on another system or on paper after handling a caller. Once the caller disconnects, the agent's phone can be configured to be "unavailable" to the workgroup queue for a fixed or variable period of time even though the agent's extension is still signed onto the queue. This allows the agent time to wrap up.

The wrapup time can be a fixed number of minutes after which the agent is forced back into taking calls, or it can be variable, controlled by MaxAgent, where the agent “releases” their phone for the next call. The settings can be designed to allow agents to control the wrapup time until a limit occurs (the fixed time).

Index

A

AGENTACTIVITY 55
AgentActivity 79
AGENTPERWGSUMMARY1 57, 58, 60, 62
AGENTSUMMARY 60, 62

C

call
  detail 5
  sequences 44
call reports, external 8

D

downgrade procedure 2

E

external logging 8
EXTINFORMATION 78

G

glossary 10, 81

I

inbound call scenarios 44
installation requirements 1

L

link session ID number 64
login 11
logout 11

M

Microsoft SQL 8
multi-project naming 10

N

node ID 55, 57, 58, 60, 61, 62, 63, 78, 79

R

ring no answer 11
route name 10

S

session ID 18
session ID number 64
SMDR 10
SQL 8
Stop button 26
system requirements 1

T

trunk
  type 66

W

WGRTSUMMARY 70
WGSUMMARY 73
wrapup 10